M28A(86)-1

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Inorganic Chemicals

U.S. Department of Commerce
BUREAU OF THE CENSUS

JANUARY 1986
M28A(86)-1
Issued April 1986

The statistics in this publication are based on a survey of manufacturers and represent total U.S. production and stocks of specified inorganic chemicals. Estimates are included for companies for which reports were not received in time for tabulation. A description of the survey methodology and related information appears on page 5.

This report is available electronically in CENDATA, the Bureau's online information service, through a commercial vendor. The electronic version of this report will be available approximately one week earlier than the printed report. The CENDATA report for February 1986 will be released on or about April 14, 1986. For further information, contact Customer Service, DUSD, Bureau of the Census, Washington, D.C. 20233, or call (301) 763-4100.

Table 1. SUMMARY OF PRODUCTION OF PRINCIPAL INORGANIC CHEMICALS: 1984 to 1986

(Short tons)

Month and year	Chlorine gas (28121 11) (100%)	Sodium hydroxide, total liquid (28123 50) (100%)	Titanium dioxide (28161 00) (commodity weight)	Hydrochloric acid (28194 41, 45,47) (100%)	Aluminum sulfate (28196 51) (17% Al_2O_3)	Sodium phosphate tripoly (28197 38) (100%)	Phosphorus elemental (28199 58) (100%)	Aluminum oxide (28195 00) (100%)
1986								
January	782,843	846,557	75,365	224,854	88,484	49,774	33,340	199,145
1985								
Total	10,464,919	10,959,042	814,014	2,776,795	1,003,224	606,915	358,848	2,820,836
December	875,365	907,005	74,722	213,972	77,468	39,932	26,735	184,016
November	779,105	834,995	66,903	202,357	79,179	43,023	28,757	204,273
October	849,359	907,637	67,543	242,724	86,007	52,565	29,810	201,826
September	845,829	898,876	72,443	237,597	82,384	49,644	25,108	228,956
August	843,715	885,453	65,279	216,652	90,029	52,829	29,375	214,538
July	904,624	942,525	71,441	236,881	89,201	52,457	29,123	237,703
June	929,061	934,805	73,370	245,792	86,697	53,143	33,412	232,845
May	926,768	962,824	67,181	245,827	84,662	54,226	32,464	239,412
April	926,223	975,295	68,350	235,086	81,275	52,454	33,537	265,123
March	907,945	954,367	63,030	262,536	89,931	57,236	32,441	284,887
February	828,991	875,243	61,518	225,917	73,941	47,529	26,531	239,713
January	847,934	880,017	62,234	211,971	82,450	51,877	31,555	287,544
1984								
Total	10,699,543	10,914,071	834,889	2,732,323	1,129,476	675,078	386,063	3,954,349
December	884,571	918,798	64,620	215,795	80,390	53,493	35,755	293,211
November	849,154	870,006	76,633	199,710	81,531	58,410	32,875	273,400
October	834,689	882,246	65,587	202,479	88,935	65,499	31,592	309,165
September	906,698	920,625	75,182	225,383	84,790	52,589	32,179	318,711
August	880,467	899,505	64,264	229,560	101,135	60,363	27,191	357,432
July	894,191	912,129	69,159	223,955	99,312	48,563	32,155	351,800
June	943,343	960,993	77,630	227,929	94,797	54,494	34,853	349,631
May	949,384	960,106	67,536	217,432	110,459	58,903	35,535	(S)
April	966,092	988,934	69,281	263,009	87,887	55,307	29,131	(S)
March	924,550	927,830	73,949	244,942	103,771	61,277	33,069	(S)
February	868,311	886,379	67,965	232,559	93,895	52,856	30,088	(S)
January	798,093	786,520	63,083	249,570	102,574	53,324	31,640	(S)

Note: Data for 1984 have been revised based on the comparison of figures from monthly report M28A with the 1984 annual report MA28A, Inorganic Chemicals, issued December 1985.

(S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

Address inquiries concerning these figures to U.S. Department of Commerce, Bureau of the Census, Industry Division, Washington, D.C. 20233, or call Deborah Clemens, (301) 763-7807.

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Table 2. PRIMARY PRODUCTION AND STOCKS OF INORGANIC CHEMICALS

(Short tons)

Product code	Product description	January 1986		December 1985		January 1985	
		Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants
	Chlorine and alkalies:						
	Chlorine (100%):						
28121 11	Gas[1]	782,843	(NA)	875,365	(NA)	818,288	(NA)
28121 15	Liquid	463,906	(NA)	540,599	(NA)	484,351	(NA)
	Sodium hydroxide (caustic soda) (100%) (all processes):						
28123 50	Liquid[2]	846,557	(NA)	907,005	(NA)	853,264	(NA)
28123 67	Dry (all forms)	19,179	(NA)	15,243	(NA)	22,339	(NA)
28125 21	Potassium hydroxide (caustic potash) (88 to 92%), liquid[2]	21,883	(NA)	22,350	(NA)	19,249	(NA)
28125 30	Finished sodium bicarbonate (58% Na_2O)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28125 90	Sodium carbonate, natural and synthetic (58%)[3]	715,912	482,713	739,011	427,630	668,427	318,374
	Acids:						
	Hydrochloric (100%)	224,854	(NA)	213,972	(NA)	208,449	(NA)
28194 41	From salt and acid	(4)	(NA)	(4)	(NA)	(4)	(NA)
28194 45	From chlorine and hydrogen	20,151	(NA)	18,679	(NA)	17,518	(NA)
28194 47	Byproduct and other	204,703	(NA)	195,293	(NA)	190,931	(NA)
	Hydrofluoric (100%):						
28194 61	Produced and withdrawn from system (anhydrous, technical, and aqueous)[5]	11,487	(NA)	8,309	(NA)	12,806	(NA)
28194 65	Produced but not withdrawn from system	(D)	(NA)	(D)	(NA)	(D)	(NA)
28194 66	Boric acid (100% H_3BO_3), (ortho boric acid)	(D)	(D)	(D)	(D)	(D)	(D)
	Other chemicals:						
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3)	a199,145	a113,915	a184,016	a169,094	287,344	(S)
28196 17	Aluminum chloride, anhydrous (100%)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28196 51	Aluminum sulfate (commercial) (17% aluminum oxide)[6]	a88,464	(NA)	a77,468	(NA)	a82,450	(NA)
28199 12	Calcium carbide (commercial)	18,941	(NA)	18,084	(NA)	19,272	(NA)
28199 19	Calcium phosphates:						
	Monobasic (21% minimum P) (100%)[7]	14,503	9,766	(NA)	(NA)	(NA)	(NA)
	Dibasic (18.5% minimum P) (100%)[7]	60,216	28,500	62,563	r23,480	81,160	31,126
	Tribasic (defluorinated phosphate rock) (18.0% minimum P):						
28742 71	Animal feed, grade (defluorinated phosphate rock) (100%)	28,111	19,068	27,936	18,920	27,319	23,544
28199 22	Other grades (100%)	(D)	(D)	(D)	(D)	(D)	(D)
	Carbon, activated[8]	6,878	10,009	r7,393	10,686	7,346	17,356
28199 25	Granular carbons (dry weight)[9]	2,948	6,048	3,331	6,926	3,299	12,501
28199 27	Pulverized carbons (dry weight)	3,930	3,961	r4,062	3,760	4,047	4,855
	Chrome colors:						
28163 15	Chrome yellow and orange (c.p.)	1,482	(NA)	1,172	(NA)	a1,453	(NA)
28163 17	Molybdate chrome orange (c.p.)	319	(NA)	332	(NA)	a408	(NA)
28199 39	Hydrogen peroxide (100% by weight)	9,536	(NA)	r10,442	(NA)	10,044	(NA)
28199 58	Phosphorus, elemental, white (yellow) and red (technical)	33,340	16,190	26,735	(D)	31,555	11,329
28199 60	Phosphorus, oxychloride (100%)	a2,651	(NA)	1,980	(NA)	2,123	(NA)
28199 61	Phosphorus, pentasulfide (100%)	6,081	(NA)	5,211	(NA)	5,295	(NA)
28199 63	Phosphorus, trichloride (chloride) (100%)	a7,208	(NA)	5,972	(NA)	6,049	(NA)
28197 18	Potassium pyrophosphate (tetrapotassium pyrophosphate) (anhydrous, 100%)	(S)	(NA)	1,591	(NA)	2,215	(NA)
28199 69	Silicon tetrachloride (silicon) (100% $SiCl_4$)	a2,754	(NA)	1,553	(NA)	(S)	(NA)
28197 21	Sodium metal (100%)	(D)	3,908	(D)	3,992	7,041	(D)
28199 33	Sodium bichromate and chromate (hydrous)	(D)	(NA)	(D)	(NA)	12,011	(NA)
28197 27	Sodium chlorate (100%)	21,530	7,438	22,018	7,225	21,562	a12,752
29197 30	Sodium hydrosulfite (100%)	(D)	(NA)	(D)	(NA)	4,901	(NA)
	Sodium phosphates:						
28197 34	Tribasic (100%)	2,825	(NA)	2,798	(NA)	(D)	(NA)
28197 35	Tetrabasic (pyro) (100%)	2,085	(NA)	2,752	(NA)	(D)	(NA)
28197 36	Meta (100%)	3,400	(NA)	2,536	(NA)	3,144	(NA)
28197 38	Tripoly (100%)	49,774	(NA)	39,614	(NA)	51,877	(NA)
28197 41	Sodium silicate (soluble silicate glass, liquid and solid) (anhydrous)[10]	79,349	(NA)	49,852	(NA)	62,672	(NA)
28197 42	Metasilicate pentahydrate (100%)	3,712	(NA)	3,157	(NA)	4,536	(NA)
28197 44	Metasilicate anhydrous (100%)	6,091	(NA)	5,002	(NA)	a6,311	(NA)
	Sodium sulfate (100%)	64,816	(NA)	r63,960	(NA)	71,651	(NA)
28197 61	High purity	35,301	(NA)	35,052	(NA)	33,868	(NA)
28197 66	Lower purity (99% or less) (includes Glaubers salt)	29,515	(NA)	28,908	(NA)	37,783	(NA)
28161 00	Titanium dioxide (composite and pure) (commodity weight)[11]	75,365	64,799	74,722	56,756	62,234	80,607

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text for a discussion of estimation of missing reports): a20 percent or more of this item is estimated.

(D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. rRevised by 5 percent or more from previously published figures. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1] Production includes amounts liquefied.
[2] Liquid production figures represent total production, including quantities later evaporated to solid caustic.
[3] Source: Bureau of the Mines.
[4] Beginning in July 1985, "Hydrochloric acid from salt and acid" is combined with "Hydrochloric acid, byproduct and other".
[5] Excludes anhydrous used in aqueous.
[6] Excludes quantities produced and consumed in municipalities.
[7] Includes animal feed and other grades, but excludes superphosphate or other fertilizer materials.
[8] Excludes reactivated carbon.
[9] Includes pelleted carbon.
[10] Excludes amounts produced and consumed in making meta, ortho, and sesquisilicates.
[11] Represents total stocks of producing companies, including amounts held at locations other than producing plants.

Table 3. PRODUCTION OF INORGANIC CHEMICALS, BY STATE

(Short tons)

Geographic area	Aluminum sulfate, commercial (17% Al_2O_3)[1]	Sodium silicate (anhydrous)[2]	Hydrochloric acid (100% HCL)	Chlorine gas (100% Cl)[3]	Sodium hydroxide (100% NaOH) total liquid, all processes[4]
JANUARY 1986					
United States	88,464	79,349	224,303	764,972	826,226
Alabama	(D)	(D)	(D)	51,419	49,947
California	4,446	(D)	(D)	(D)	(D)
Georgia	(D)	6,283	(D)	17,669	20,642
Illinois	(D)	(D)	8,398	(D)	(D)
Kentucky	-	-	33,028	(D)	(D)
Louisiana	13,082	(D)	50,710	287,894	320,720
Michigan	(D)	-	3,522	-	-
New Jersey	(D)	(D)	(D)	-	-
New York	-	(D)	(D)	43,200	43,559
Tennessee	5,585	(D)	-	(D)	(D)
Texas	(D)	(D)	(D)	188,238	223,707
Washington	(D)	(D)	3,246	47,465	49,480
West Virginia	(D)	-	6,819	(D)	(D)
All other states	34,831	17,400	37,899	72,375	62,735
DECEMBER 1985					
United States	77,468	49,852	214,235	882,419	915,034
Alabama	(D)	(D)	(D)	51,538	49,982
California	3,339	(D)	(D)	(D)	(D)
Georgia	(D)	6,833	(D)	18,121	21,608
Illinois	(D)	(D)	5,426	(D)	(D)
Kentucky	-	-	(D)	(D)	(D)
Louisiana	9,682	(D)	49,141	323,371	362,145
Michigan	(D)	-	3,238	-	-
New Jersey	(D)	(D)	6,145	-	-
New York	-	(D)	(D)	48,624	47,981
Tennessee	4,911	(D)	-	(D)	(D)
Texas	(D)	(D)	(D)	241,194	235,280
Washington	(D)	(D)	3,429	42,964	47,964
West Virginia	(D)	-	4,180	(D)	(D)
All other states	33,008	19,930	32,161	80,377	68,691

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies.

[1] Excludes quantities produced and consumed in municipalities.
[2] Excludes amounts produced and consumed in making meta, ortho, and sesquisilicates.
[3] Production includes amount liquefied.
[4] Includes quantities later evaporated to solid.

Table 4. PRODUCTION, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF SELECTED INORGANIC CHEMICALS: DECEMBER 1985

(Short tons)

Product code	Product description	Quantity produced	Exports of domestic merchandise[1]	Imports for consumption[2]	Apparent consumption[3]	Percent imports to apparent consumption
28161 00	Titanium dioxide (composite and pure)	74,722	6,967	15,154	82,909	18.3
	Hydrochloric acid:					
28194 41	From salt and acid	213,972	1,122	6,775	219,625	3.1
28194 45	From chlorine and hydrogen					
28194 47	By-product and other					
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3)	184,016	3,790	350,524	530,750	66.0
28196 31	Aluminum sulfate (commercial)	77,468	429	1,655	78,694	2.1
28197 27	Sodium chlorate	22,018	168	14,386	36,236	39.7
28197 30	Sodium hydrosulfite	(D)	1,278	259	(D)	(D)
	Sodium sulfates (anhydrous 100%):					
28197 61	High purity	63,960	23,341	10,688	51,307	20.8
28197 66	Lower purity (99% or less) (including Glauber's salt)					
28199 12	Calcium carbide (commercial)	18,084	88	1,151	19,147	6.0
28199 58	Phosphorus elemental	26,735	1,986	422	25,171	1.7

Note: This table includes only products relative to this report which are directly comparable for imports, exports, and domestic output (see table 5).

(D) Data withheld to avoid disclosing figures for individual companies.

[1]Source: Bureau of the Census report EX 546, U.S. Exports.
[2]Source: Bureau of the Census report IM 145-X, U.S. Imports for Consumption and General Imports.
[3]Apparent consumption represents new domestic supply and is derived by subtracting exports from the total of manufactures' production plus imports.

Table 5. COMPARISON OF SIC CODES (DOMESTIC OUTPUT), SCHEDULE B EXPORT NUMBERS, AND TSUSA IMPORT NUMBERS

Domestic output	Export	Import
28161 00	472.5000	473.7000
28194 41	416.1500	416.1500
28194 45		
28194 47		
28195 00	417.1240	417.1240
28196 51	417.1600	417.1600
28197 27	420.8800	420.8800
28197 30	421.0600	421.0600
28197 61	421.4200	421.4200
		421.4400
28197 66	421.4500	421.4600
28199 12	418.1400	418.1400
28199 58	415.3500	415.3500

DESCRIPTION OF SURVEY

Scope of Survey. This survey covers all manufacturers of selected inorganic chemicals in the United States.

Survey Methodology. The statistics in this publication were collected by mail on Bureau of the Census monthly Form M28A, Inorganic Chemicals, from a survey panel which includes all known producers of selected inorganic chemicals in the United States, approximately 360 establishments.

Survey Error. Figures for the current month may include estimates for panel members for which reports were not received in time for tabulation. Such missing figures are "imputed" based on month-to-month movements shown by reporting firms. Imputation generally is limited to a maximum of 20 percent for any one data cell. Figures with imputation rates greater than 20 percent are footnoted.

The imputation rate is not an explicit indicator of the potential error in published figures due to nonresponse because the actual movements for nonrespondents may or may not closely agree with the imputed movements. The range of difference between the actual and imputed figures is not precisely known, but is assumed to be small. The degree of uncertainty regarding the accuracy of the published data, however, increases as the percentage of imputation increases. Figures with estimation rates above 20 percent should be used with caution.

Revisions to Previous Period Data. Statistics for previous months may be revised as the result of corrected data from respondents, including the receipt of late reports for which imputations were made as described above. Figures which have been revised by more than 5 percent from previously published figures are indicated by footnotes.

Reporting Period Adjustment. The data are adjusted for the number of working days in the reporting period to compensate for differences in individual company reporting patterns, i.e., calendar month, 4-week, 5-week periods. Since the calendar month accounting system prevails in this industry, adjustments have been made to those reporting on other than a calendar month basis.

EXPLANATION OF TERMS

Production—Data shown for production represent total quantity of each chemical produced, including quantity consumed in the plant or sold or transferred to other plants or warehouses of the same company. Products produced under toll agreements are reported by the establishment which owns the raw material from which the products are produced. The data provide a measure of total production but do not necessarily indicate amounts entering the market since, in some cases, figures are included for material produced as an intermediate process in the production of other end products.

Stocks—Data shown for stocks represent quantities on hand at the end of the month at producing locations only unless footnoted to indicate that stocks of producing companies include amounts held at other locations.

COMPARISON OF EXPORT, IMPORT, AND DOMESTIC OUTPUT DATA

The Standard Industrial Classification (SIC) system used for domestic output and the statistical export and import commodity classifications were developed independently. This results in considerable difficulty in comparing the three types of data for many commodity areas. The domestic output classification is based on type of industry; on the other hand, the export and import classification system is more materials oriented. Also, there are a substantial number of imported commodities which have no comparable domestic output classification. The relationships shown in this report should be considered only as approximations, since, in addition to the problems mentioned above, there are also the following problems affecting the comparability of the three sets of data.

Valuation. There are different methods of valuation for the three types of data:

- *Domestic Output.* Valued at the point of production. It includes the net sales price, f.o.b. plant, after discounts and allowances, exclusive of freight charges and excise taxes.

- *Exports.* Valued at the point of exportation. It includes the selling price, or cost if not sold, and inland freight, insurance and other charges to the export point.

  Estimated producers' values of exports have also been developed. These values more closely approximate the values reported for domestic output because they exclude freight, insurance, and other charges applied from the producing plant to the export point.

- *Imports.* Valued at the first port of entry in the United States. It includes c.i.f. (cost, insurance, and freight), duty, and other charges to the import point.

Duplication in Quantity and Value of Output. Because producers' shipments of some commodities may be used as materials for incorporation into other commodities, combinations of data for such commodities may contain a certain amount of duplication. Thus, percentages of exports to output or imports to apparent consumption (output plus imports minus exports) at four-digit or broader levels may be understated. Where duplication is known to be substantial, the output data are appropriately noted in the table.

Low-Value Export and Import Transactions. Detailed commodity information is not included for individual export shipments valued at not more than $1,000. Generally, detailed commodity information is not included for individual import shipments valued at

not more than $1,000. For textiles and textile products, gloves, footwear, and miscellaneous rubber and plastics products, detailed commodity information is not included for individual import shipments valued at not more than $250. This is believed to have only negligible effects on the statistics for the bulk of the commodities.

Manufacturers' Shipments, Not Specified by Kind. The value of manufacturers' shipments at the four-digit industry level often includes a small amount which is not distributed among the individual five-digit product classes. Export and import percentages at the more detailed levels might, therefore, be slightly overstated.

Time Lag Between Output and Exports. There will be a lag between the time a commodity is produced or shipped by the producer and the time it is actually exported, especially when intermediaries (wholesalers, exporters, etc.) are involved. Ordinarily, this type of discrepancy is insignificant in annual figures.

Direct'' vs ''Total'' Commodity Exports and Imports. Export and import data do not include materials which are incorporated into other more finished products and exported or imported in finished form. Thus, by showing only direct exports and imports, the relation of exports to output and imports to apparent consumption for intermediate products is considerably understated.

Used Commodities. With a few exceptions, used or rebuilt commodities are classified in the same import or export codes as is new merchandise. Percentages are thus overstated to the extent that used or rebuilt products are significant in trade.

Geographic Area of Coverage. Import and export data reflect the movement of merchandise into and out of U.S. foreign trade zones, the U.S. Virgin Islands, and the U.S. customs territory (includes the 50 States, the District of Columbia, and Puerto Rico).

RELATED REPORTS

An annual Current Industrial Report MA28A, *Inorganic Chemicals*, also is published in this series. The annual report provides detailed information on shipments, interplant trransfers, and captive use of additional inorganic chemicals and shows revisions in the monthly series for both current and previous year. It also provides a single reference copy to replace the monthly publications.

The Bureau of the Census published the following related reports:

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Other Industry Reports		
M3-1	Monthly	*Manufactures' Shipments, Inventories, and Orders*
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Foreign Trade Reports		
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CONTACTS FOR DATA USERS

Subject Area	Contact	Phone Number
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Manufacturers' Shipments, Inventories, and Orders	Kathleen Menth	(301) 763 2575
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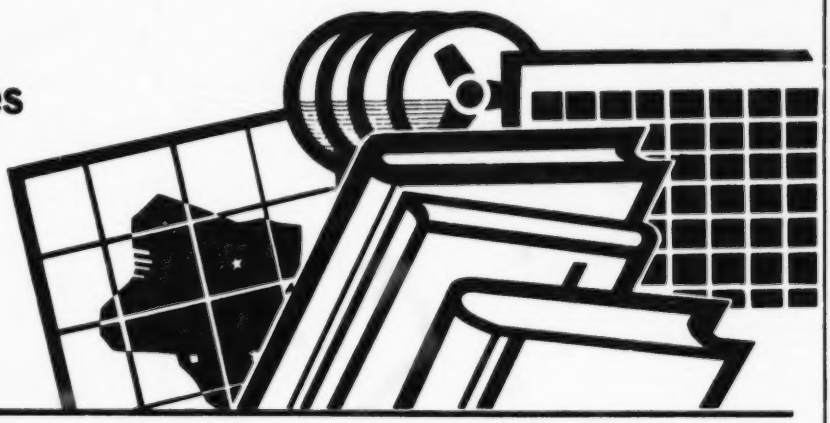

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The statistics in this publication are based on a survey of manufacturers and represent total U.S. production and stocks of specified inorganic chemicals. Estimates are included for companies for which reports were not received in time for tabulation. A description of the survey methodology and related information may be found in the January 1986 report for this series, M28A(86)-1, issued April 1986.

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Table 1. SUMMARY OF PRODUCTION OF PRINCIPAL INORGANIC CHEMICALS: 1984 to 1986

(Short tons)

Month and year	Chlorine gas (28121 11) (100%)	Sodium hydroxide, total liquid (28123 50) (100%)	Titanium dioxide (28161 00) (commodity weight)	Hydrochloric acid (28194 41, 45,47) (100%)	Aluminum sulfate (28196 51) (17% Al_2O_3)	Sodium phosphate tripoly (28197 38) (100%)	Phosphorus elemental (28199 58) (100%)	Aluminum oxide (28195 00) (100%)
1986								
February	759,189	808,622	72,132	216,765	(S)	50,668	29,780	192,471
January	782,843	848,990	75,365	225,012	89,484	49,774	33,340	199,145
1985								
Total	10,464,919	10,959,042	814,014	2,776,795	1,003,224	606,915	358,848	2,820,836
December	875,365	907,005	74,722	213,972	77,468	39,932	26,735	184,016
November	779,105	834,995	66,903	202,357	79,179	43,023	28,757	204,273
October	849,359	907,637	67,543	242,724	86,007	52,565	29,810	201,826
September	845,829	898,876	72,443	237,597	82,384	49,644	25,108	228,956
August	843,715	885,453	65,279	216,652	90,029	52,829	29,375	214,538
July	904,624	942,525	71,441	236,881	89,201	52,457	29,123	237,703
June	929,061	934,805	73,370	245,792	86,697	53,143	33,412	232,845
May	926,768	962,824	67,181	245,827	84,662	54,226	32,464	239,412
April	926,223	973,295	68,350	235,086	81,275	52,454	33,537	263,123
March	907,945	954,367	63,030	262,536	89,931	57,236	32,441	284,887
February	828,991	875,243	61,518	225,917	73,941	47,529	26,531	239,713
January	847,934	880,017	62,234	211,971	82,450	51,877	31,555	287,544
1984								
Total	10,699,543	10,914,071	834,889	2,732,323	1,129,476	675,078	386,063	3,934,349
December	884,571	918,798	64,620	215,795	80,390	53,493	35,755	293,211
November	849,154	870,006	76,633	199,710	81,531	58,410	32,875	273,400
October	834,689	882,246	65,587	202,479	88,935	65,499	31,592	309,165
September	906,698	920,625	75,182	225,383	84,790	52,589	32,179	318,711
August	880,467	899,505	64,264	229,560	101,135	60,363	27,191	357,432
July	894,191	912,129	69,159	223,955	99,312	48,563	32,155	351,800
June	943,343	960,993	77,630	227,929	94,797	54,494	34,853	349,631
May	949,384	960,106	67,536	217,432	110,459	58,903	35,535	(S)
April	966,092	988,934	69,281	263,009	87,887	55,307	29,131	(S)
March	924,550	927,830	73,949	244,942	103,771	61,277	33,069	(S)
February	868,311	886,379	67,965	232,559	93,895	52,856	30,088	(S)

Note: Data for 1984 have been revised based on the comparison of figures from monthly report M28A with the 1984 annual report MA28A, Inorganic Chemicals, issued December 1985.

(S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

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C3.158:

Table 2. PRIMARY PRODUCTION AND STOCKS OF INORGANIC CHEMICALS

(Short tons)

Product code	Product description	February 1986		January 1986		February 1985	
		Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants
	Chlorine and alkalies:						
	Chlorine (100%):						
28121 11	Gas[1]	[a]759,184	(NA)	[a]782,843	(NA)	828,991	(NA)
28121 15	Liquid	488,676	(NA)	475,906	(NA)	470,163	(NA)
	Sodium hydroxide (caustic soda) (100%) (all processes):						
28123 50	Liquid[2]	[a]808,622	(NA)	[a]848,990	(NA)	875,243	(NA)
28123 67	Dry (all forms)	18,375	(NA)	19,179	(NA)	23,078	(NA)
28125 21	Potassium hydroxide (caustic potash) (88 to 92%), liquid[2]	19,058	(NA)	20,669	(NA)	17,648	(NA)
28125 30	Finished sodium bicarbonate (58% Na_2O)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28125 90	Sodium carbonate, natural and synthetic (58%)[3]	655,675	428,176	715,912	482,713	648,890	313,988
	Acids:						
	Hydrochloric (100%):						
28194 41	From salt and acid	216,765	(NA)	225,012	(NA)	225,917	(NA)
28194 43	From chlorine and hydrogen	(4)	(NA)	(4)	(NA)	(4)	(NA)
28194 47	Byproduct and other	[a 4]17,623	(NA)	[a 4]20,512	(NA)	[4]21,255	(NA)
	Hydrofluoric (100%):	[4]199,142	(NA)	[4]204,500	(NA)	[4]204,662	(NA)
28194 61	Produced and withdrawn from system (anhydrous, technical, and aqueous)[5]	[a]12,896	(NA)	11,487	(NA)	12,421	(NA)
28194 63	Produced but not withdrawn from system	(D)	(NA)	(D)	(NA)	(D)	(NA)
28194 66	Boric acid (100% H_3BO_3), (ortho boric acid)	(D)	(D)	(D)	(D)	(D)	(D)
	Other chemicals:						
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3)	[a]192,471	[a]123,188	[2]199,145	[a]113,915	[a]239,713	(S)
28196 17	Aluminum chloride, anhydrous (100%)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28196 51	Aluminum sulfate (commercial) (17% aluminum oxide)[6]	(S)	(NA)	[a]89,484	(NA)	[a]73,941	(NA)
28199 12	Calcium carbide (commercial)	17,864	(NA)	18,941	(NA)	19,606	(NA)
28199 19	Calcium phosphates:						
	Monobasic (21% minimum P) (100%)	14,511	11,116	14,503	9,766	(NA)	(NA)
	Dibasic (18.5% minimum P) (100%)[7]	66,954	34,516	60,216	28,500	60,016	(NA)
	Tribasic (defluorinated phosphate rock) (18.0% minimum P):						
28742 71	Animal feed, grade (defluorinated phosphate rock) (100%)	21,710	17,325	28,111	19,068	30,275	23,329
28199 22	Other grades (100%)	(D)	(D)	(D)	(D)	(D)	(D)
	Carbon, activated[8]	9,066	7,802	6,878	10,097	6,416	16,405
28199 25	Granular carbons (dry weight)[9]	4,374	6,270	2,948	6,058	2,816	11,768
28199 27	Pulverized carbons (dry weight)	4,492	1,532	3,930	4,039	3,600	4,637
	Chrome colors:						
28163 15	Chrome yellow and orange (c.p.)	1,955	(NA)	1,482	(NA)	[a]937	(NA)
28163 17	Molybdate chrome orange (c.p.)	493	(NA)	319	(NA)	[a]329	(NA)
28199 39	Hydrogen peroxide (100% by weight)	9,010	(NA)	9,536	(NA)	11,270	(NA)
28199 58	Phosphorus, elemental, white (yellow) and red (technical)	29,780	(D)	33,340	16,190	26,531	11,981
28199 60	Phosphorus, oxychloride (100%)	2,151	(NA)	2,372	(NA)	2,107	(NA)
28199 61	Phosphorus, pentasulfide (100%)	4,919	(NA)	5,824	(NA)	6,379	(NA)
28199 63	Phosphorus, trichloride (chloride) (100%)	7,471	(NA)	7,613	(NA)	6,819	(NA)
28197 18	Potassium pyrophosphate (tetrapotassium pyrophosphate) (anhydrous, 100%)	[1]1,308	(NA)	[1]1,069	(NA)	1,270	(NA)
28199 69	Silicon tetrachloride (silicon) (100% $SiCl_4$)	[a]1,757	(NA)	[a]2,754	(NA)	(S)	(NA)
28197 21	Sodium metal (100%)	(D)	3,613	(D)	3,908	6,684	(D)
28199 33	Sodium bichromate and chromate (hydrous)	(D)	(NA)	(D)	(NA)	12,380	(NA)
28197 27	Sodium chlorate (100%)	20,844	[a]5,430	22,066	7,438	21,533	10,629
29197 30	Sodium hydrosulfite (100%)	(D)	(NA)	(D)	(NA)	(D)	(NA)
	Sodium phosphates:						
28197 34	Tribasic (100%)	3,431	(NA)	3,141	(NA)	(D)	(NA)
28197 35	Tetrabasic (pyro) (100%)	2,021	(NA)	1,989	(NA)	(D)	(NA)
28197 36	Meta (100%)	3,344	(NA)	3,400	(NA)	3,310	(NA)
28197 38	Tripoly (100%)	50,668	(NA)	49,774	(NA)	47,529	(NA)
28197 41	Sodium silicate (soluble silicate glass, liquid and solid) (anhydrous)[10]	85,598	(NA)	79,349	(NA)	67,630	(NA)
28197 42	Metasilicate pentahydrate (100%)	4,510	(NA)	3,712	(NA)	3,876	(NA)
28197 44	Metasilicate anhydrous (100%)	3,992	(NA)	6,091	(NA)	4,382	(NA)
	Sodium sulfate (100%)	71,207	(NA)	68,005	(NA)	73,671	(NA)
28197 61	High purity	34,765	(NA)	38,490	(NA)	34,358	(NA)
28197 66	Lower purity (99% or less) (includes Glaubers salt)	32,977	(NA)	29,515	(NA)	[r]35,331	(NA)
28161 00	Titanium dioxide (composite and pure) (commodity weight)[11]	72,132	69,660	75,365	64,799	61,518	78,225

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28A(86)-1, issued April 1986, for a discussion of estimation of missing reports): [a]20 percent or more of this item is estimated.

(D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. [r]Revised by 5 percent or more from previously published figures. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1]Production includes amounts liquefied.
[2]Liquid production figures represent total production, including quantities later evaporated to solid caustic.
[3]Source: Bureau of the Mines.
[4]Beginning in July 1985, "Hydrochloric acid from salt and acid" is combined with "Hydrochloric acid, byproduct and other".
[5]Excludes anhydrous used in aqueous.
[6]Excludes quantities produced and consumed in municipalities.
[7]Includes animal feed and other grades, but excludes superphosphate or other fertilizer materials.
[8]Excludes reactivated carbon.
[9]Includes pelleted carbon.
[10]Excludes amounts produced and consumed in making meta, ortho, and sesquisilicates.
[11]Represents total stocks of producing companies, including amounts held at locations other than producing plants.

Table 3. PRODUCTION OF INORGANIC CHEMICALS, BY STATE

(Short tons)

Geographic area	Aluminum sulfate, commercial (17% Al_2O_3)[1]	Sodium silicate (anhydrous)[2]	Hydrochloric acid (100% HCL)	Chlorine gas (100% Cl)[3]	Sodium hydroxide (100% NaOH), total liquid, all processes[4]
FEBRUARY 1986					
United States	(S)	85,598	216,765	759,184	808,622
Alabama	(D)	(D)	(D)	47,070	45,615
California	3,945	(D)	5,049	(D)	(D)
Georgia	(D)	5,510	(D)	16,347	18,966
Illinois	(D)	(D)	8,339	-	-
Kentucky	-	-	31,425	(D)	(D)
Louisiana	20,147	(D)	49,851	272,547	304,028
Michigan	(D)	-	2,841	-	-
New Jersey	(D)	(D)	(D)	-	-
New York	-	(D)	(D)	43,713	42,731
Tennessee	4,756	(D)	-	(D)	(D)
Texas	(D)	(D)	59,827	198,311	215,366
Washington	(D)	(D)	3,106	41,715	44,868
West Virginia	(D)	-	7,143	(D)	(D)
All other states	29,137	21,526	34,375	66,789	59,472
JANUARY 1986					
United States	[e]89,484	79,349	225,012	782,843	848,990
Alabama	(D)	(D)	(D)	51,419	49,947
California	4,446	(D)	5,244	(D)	(D)
Georgia	(D)	6,283	(D)	17,669	20,642
Illinois	(D)	(D)	[r]8,936	-	-
Kentucky	-	-	33,028	(D)	(D)
Louisiana	13,082	(D)	50,710	287,894	320,720
Michigan	(D)	-	3,522	-	-
New Jersey	(D)	(D)	(D)	-	-
New York	-	(D)	(D)	43,200	43,559
Tennessee	5,585	(D)	-	(D)	(D)
Texas	(D)	(D)	(D)	(D)	223,707
Washington	(D)	-	3,246	47,465	52,528
West Virginia	(D)	-	6,819	(D)	(D)
All other states	36,434	17,400	38,260	74,008	62,735

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28A(86)-1, issued April 1986, for a discussion of estimation of missing reports): [e]20 percent or more of this item is estimated.

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[1] Excludes quantities produced and consumed in municipalities.
[2] Excludes amounts produced and consumed in making meta, ortho, and sesquisilicates.
[3] Production includes amount liquefied.
[4] Includes quantities later evaporated to solid.

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Table 4. PRODUCTION, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF SELECTED INORGANIC CHEMICALS: JANUARY 1986

(Short tons)

Product code	Product description	Quantity produced	Exports of domestic merchandise[1]	Imports for consumption[2]	Apparent consumption[3]	Percent imports to apparent consumption
28161 00	Titanium dioxide (composite and pure)	73,365	9,890	21,005	86,480	24.3
	Hydrochloric acid:					
28194 41	From salt and acid	225,012	804	7,329	231,537	3.2
28194 45	From chlorine and hydrogen					
28194 47	By-product and other					
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3)	199,145	97,434	236,543	338,254	69.9
28196 51	Aluminum sulfate (commercial)	89,484	536	6,137	95,085	6.4
28197 27	Sodium chlorate	22,066	4	17,863	39,925	44.7
28197 30	Sodium hydrosulfite	(D)	1,734	325	(D)	(D)
	Sodium sulfates (anhydrous 100%):					
28197 61	High purity	68,005	820	16,554	83,739	19.8
28197 66	Lower purity (99% or less) (including Glauber's salt)					
28199 12	Calcium carbide (commercial)	18,941	149	1,501	20,293	7.4
28199 58	Phosphorus elemental	33,340	1,800	218	31,758	0.7

Note: This table includes only products relative to this report which are directly comparable for imports, exports, and domestic output (see table 5 in the January 1986 report, M28A(86)-1, issued April 1986).

(D) Data withheld to avoid disclosing figures for individual companies.

[1]Source: Bureau of the Census report EX 546, U.S. Exports.
[2]Source: Bureau of the Census report IM 145-X, U.S. Imports for Consumption and General Imports.
[3]Apparent consumption represents new domestic supply and is derived by subtracting exports from the total of manufactures' production plus imports.

M28A(86)-3

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1986								
March	862,776	927,493	78,493	241,234	98,381	54,787	31,045	204,708
February	759,189	809,167	77,182	221,425	85,101	50,668	29,780	192,471
January	782,843	848,990	75,365	225,012	89,484	49,774	33,340	199,145
1985								
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March	907,945	954,367	63,030	262,536	89,931	57,236	32,441	284,887
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January	847,934	880,017	62,234	211,971	82,450	51,877	31,555	287,544
1984								
Total	10,699,543	10,914,071	834,889	2,732,323	1,129,476	675,078	386,063	3,954,349
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June	943,343	960,993	77,630	227,929	94,797	54,494	34,853	349,631
May	949,384	960,106	67,536	217,432	110,459	58,903	35,535	(S)
April	966,092	988,934	69,281	263,009	87,887	55,307	29,131	(S)
March	924,550	927,830	73,949	244,942	103,771	61,277	33,069	(S)

Note: Data for 1984 have been revised based on the comparison of figures from monthly report M28A with the 1984 annual report MA28A, Inorganic Chemicals, issued December 1985.

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(Short tons)

Product code	Product description	March 1986		February 1986		March 1985	
		Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants
	Chlorine and alkalies:						
	Chlorine (100%):						
28121 11	Gas[1]	a862,776	(NA)	a759,184	(NA)	907,945	(NA)
28121 15	Liquid	568,857	(NA)	493,308	(NA)	535,973	(NA)
	Sodium hydroxide (caustic soda) (100%) (all processes):						
28123 50	Liquid[2]	a927,493	(NA)	a809,167	(NA)	934,367	(NA)
28123 67	Dry (all forms)	20,523	(NA)	18,935	(NA)	24,737	(NA)
28125 21	Potassium hydroxide (caustic potash) (88 to 92%), liquid[2]	(D)	(NA)	(D)	(NA)	18,350	(NA)
28125 30	Finished sodium bicarbonate (58% Na_2O)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28125 90 14745 11	Sodium carbonate, natural and synthetic (58%)[3]	743,418	568,725	655,675	426,320	702,603	313,432
	Acids:						
	Hydrochloric (100%)	241,234	(NA)	221,425	(NA)	262,536	(NA)
28194 41	From salt and acid	(4)	(NA)	(4)	(NA)	(4)	(NA)
28194 45	From chlorine and hydrogen	4 a20,512	(NA)	4 17,623	(NA)	4 24,449	(NA)
28194 47	Byproduct and other	4 a220,722	(NA)	4 a203,802	(NA)	4 238,087	(NA)
	Hydrofluoric (100%):						
28194 61 28194 65	Produced and withdrawn from system (anhydrous, technical, and aqueous)[5]	18,057	(NA)	r19,594	(NA)	16,607	(NA)
28194 66	Produced but not withdrawn from system	(D)	(NA)	(D)	(NA)	(D)	(NA)
28194 11	Boric acid (100% H_3BO_3), (ortho boric acid)	14,767	(D)	r17,697	(D)	(D)	(D)
	Other chemicals:						
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3)	a204,708	a155,073	a192,471	a123,188	a284,887	(S)
28196 17	Aluminum chloride, anhydrous (100%)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28196 51	Aluminum sulfate (commercial) (17% aluminum oxide)[6]	a98,381	(NA)	a r85,101	(NA)	a89,931	(NA)
28199 12	Calcium carbide (commercial)	19,919	(NA)	17,864	(NA)	19,993	(NA)
28199 19	Calcium phosphates:						
	Monobasic (21% minimum P) (100%)	13,505	14,397	14,511	11,116	(NA)	(NA)
	Dibasic (18.5% minimum P) (100%)[7]	71,309	34,079	66,954	34,516	73,206	28,545
	Tribasic (defluorinated phosphate rock) (18.0% minimum P):						
28742 71	Animal feed, grade (defluorinated phosphate rock) (100%)	28,013	21,885	r22,818	17,325	23,739	21,377
28199 22	Other grades (100%)	(D)	(D)	(D)	(D)	(D)	(D)
	Carbon, activated[8]	8,533	10,216	r7,337	r9,963	8,719	14,147
28199 25	Granular carbons (dry weight)[9]	4,279	6,308	r3,697	6,423	2,408	9,376
28199 27	Pulverized carbons (dry weight)	4,254	3,908	r3,640	r3,540	4,311	4,371
	Chrome colors:						
28163 15	Chrome yellow and orange (c.p.)	2,374	(NA)	1,955	(NA)	a1,887	(NA)
28163 17	Molybdate chrome orange (c.p.)	635	(NA)	493	(NA)	a583	(NA)
28199 39	Hydrogen peroxide (100% by weight)[10]	11,405	(NA)	r11,397	(NA)	13,000	(NA)
28199 58	Phosphorus, elemental, white (yellow) and red (technical)	31,045	(D)	29,780	(D)	32,441	(D)
28199 60	Phosphorus, oxychloride (100%)	2,592	(NA)	r2,512	(NA)	2,669	(NA)
28199 61	Phosphorus, pentasulfide (100%)	5,766	(NA)	4,919	(NA)	7,008	(NA)
28199 63	Phosphorus, trichloride (chloride) (100%)	9,015	(NA)	7,471	(NA)	8,404	(NA)
28197 18	Potassium pyrophosphate (tetrapotassium pyrophosphate) (anhydrous, 100%)	a1,633	(NA)	a r1,308	(NA)	2,055	(NA)
28199 69	Silicon tetrachloride (silfet) (100% $SiCl_4$)	a4,280	(NA)	a r2,604	(NA)	(S)	(NA)
28197 21	Sodium metal (100%)	(D)	3,979	(D)	3,613	6,657	3,618
28199 33	Sodium bichromate and chromate (hydrous)	(D)	(NA)	(D)	(NA)	12,985	(NA)
28197 27	Sodium chlorate (100%)	20,974	a5,609	20,844	a5,430	20,210	a7,706
29197 30	Sodium hydrosulfite (100%)	(D)	(NA)	(D)	(NA)	(D)	(NA)
	Sodium phosphates:						
28197 34	Tribasic (100%)	3,106	(NA)	3,431	(NA)	(D)	(NA)
28197 35	Tetrabasic (pyro) (100%)	2,084	(NA)	2,021	(NA)	2,623	(NA)
28197 36	Meta (100%)	3,228	(NA)	3,344	(NA)	4,005	(NA)
28197 38	Tripoly (100%)	54,787	(NA)	50,668	(NA)	57,236	(NA)
28197 41	Sodium silicate (soluble silicate glass, liquid and solid) (anhydrous)[11]	62,756	(NA)	86,704	(NA)	a57,481	(NA)
28197 42	Metasilicate pentahydrate (100%)	3,901	(NA)	4,510	(NA)	3,765	(NA)
28197 44	Metasilicate anhydrous (100%)	5,465	(NA)	3,992	(NA)	3,690	(NA)
	Sodium sulfate (100%)	73,004	(NA)	71,207	(NA)	85,322	(NA)
28197 61	High purity	42,947	(NA)	34,765	(NA)	33,728	(NA)
28197 66	Lower purity (99% or less) (includes Glaubers salt)	30,057	(NA)	32,977	(NA)	51,594	(NA)
28161 00	Titanium dioxide (composite and pure) (commodity weight)[12]	78,493	74,539	r77,182	r73,463	63,030	69,113

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28A(86)-1, issued April 1986, for a discussion of estimation of missing reports): a20 percent or more of this item is estimated.

(D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. rRevised by 5 percent or more from previously published figures. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1] Production includes amounts liquefied.
[2] Liquid production figures represent total production, including quantities later evaporated to solid caustic.
[3] Source: Bureau of the Mines.
[4] Beginning in July 1985, "Hydrochloric acid from salt and acid" is combined with "Hydrochloric acid, byproduct and other".
[5] Excludes anhydrous used in aqueous.
[6] Excludes quantities produced and consumed in municipalities.
[7] Includes animal feed and other grades, but excludes superphosphate or other fertilizer materials.
[8] Excludes reactivated carbon.
[9] Includes palleted carbon.
[10] Production of hydrogen peroxide for January 1986 is revised as follows: 12,311 short tons.
[11] Excludes amounts produced and consumed in making meta, ortho, and sesquisilicates.
[12] Represents total stocks of producing companies, including amounts held at locations other than producing plants.

Table 3. PRODUCTION OF INORGANIC CHEMICALS, BY STATE

(Short tons)

Geographic area	Aluminum sulfate, commercial (17% Al_2O_3)[1]	Sodium silicate (anhydrous)[2]	Hydrochloric acid (100% HCL)	Chlorine gas (100% Cl)[3]	Sodium hydroxide (100% NaOH) total liquid all processes[4]
MARCH 1986					
United States	98,381	62,756	241,234	862,776	927,493
Alabama	(D)	(D)	(D)	53,276	53,290
California	(D)	(D)	6,547	(D)	(D)
Georgia	9,146	5,773	(D)	18,670	21,621
Illinois	(D)	(D)	10,729	-	-
Kentucky	-	-	34,870	(D)	(D)
Louisiana	11,707	(D)	53,735	316,469	351,187
Michigan	(D)	-	2,836	-	-
New Jersey	(D)	(D)	(D)	-	-
New York	-	(D)	(D)	43,237	42,368
Tennessee	5,124	(D)	-	(D)	24,489
Texas	(D)	(D)	69,078	236,685	257,580
Washington	4,465	-	3,254	39,973	44,634
West Virginia	(D)	-	(D)	(D)	(D)
All other states	40,011	15,570	32,023	73,629	69,704
FEBRUARY 1986					
United States	85,101	86,704	221,425	759,184	809,167
Alabama	(D)	(D)	(D)	47,070	45,615
California	r4,324	(D)	6,362	(D)	(D)
Georgia	9,808	5,510	(D)	16,347	18,966
Illinois	(D)	(D)	9,639	-	-
Kentucky	-	-	31,425	(D)	(D)
Louisiana	r9,611	(D)	51,428	272,547	304,028
Michigan	(D)	-	2,841	-	-
New Jersey	(D)	(D)	(D)	-	-
New York	-	(D)	(D)	43,713	43,247
Tennessee	4,756	(D)	-	(D)	(D)
Texas	(D)	(D)	59,827	198,625	215,366
Washington	4,201	(D)	3,106	41,715	44,868
West Virginia	(D)	-	7,143	(D)	(D)
All other states	r37,190	19,096	33,743	66,475	59,501

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. rRevised by 5 percent or more from previously published figures.

[1]Excludes quantities produced and consumed in municipalities.
[2]Excludes amounts produced and consumed in making meta, ortho, and sesquisilicates.
[3]Production includes amount liquefied.
[4]Includes quantities later evaporated to solid.

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Table 4. PRODUCTION, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF SELECTED INORGANIC CHEMICALS: FEBRUARY 1986

(Short tons)

Product code	Product description	Quantity produced	Exports of domestic merchandise[1]	Imports for consumption[2]	Apparent consumption[3]	Percent imports to apparent consumption
28161 00	Titanium dioxide (composite and pure)	77,182	11,651	17,780	83,311	21.3
	Hydrochloric acid:					
28194 41	From salt and acid	221,425	1,401	5,951	225,975	2.6
28194 45	From chlorine and hydrogen					
28194 47	By-product and other					
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3)	192,471	3,649	412,803	601,625	68.6
28196 51	Aluminum sulfate (commercial)	85,101	122	6,062	91,041	6.7
28197 27	Sodium chlorate	20,844	356	11,950	32,438	36.8
28197 30	Sodium hydrosulfite	(D)	1,178	312	(D)	(D)
	Sodium sulfates (anhydrous 100%):					
28197 61	High purity	34,765	7,521	12,051	39,295	30.7
28197 66	Lower purity (99% or less) (including Glauber's salt)					
28199 12	Calcium carbide (commercial)	17,864	202	1,424	19,086	7.5
28199 58	Phosphorus elemental	29,780	1,781	121	28,120	0.4

Note: This table includes only products relative to this report which are directly comparable for imports, exports, and domestic output (see table 5 in the January 1986 report, M28A(86)-1, issued April 1986).

(D) Data withheld to avoid disclosing figures for individual companies.

[1]Source: Bureau of the Census report EX 546, U.S. Exports.
[2]Source: Bureau of the Census report IM 145-X, U.S. Imports for Consumption and General Imports.
[3]Apparent consumption represents new domestic supply and is derived by subtracting exports from the total of manufactures' production plus imports.

M28A(86)-4

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BUREAU OF THE CENSUS

APRIL 1986
M28A(86)-4
Issued July 1986

The statistics in this publication are based on a survey of manufacturers and represent total U.S. production and stocks of specified inorganic chemicals. Estimates are included for companies for which reports were not received in time for tabulation. A description of the survey methodology and related information may be found in the January 1986 report for this series, M28A(86)-1, issued April 1986.

This report is available electronically in CENDATA, the Bureau's online information service, through a commercial vendor. The electronic version of this report will be available approximately one week earlier than the printed report. The CENDATA report for May 1986 will be released on or about July 11, 1986. For further information, contact Customer Service, DUSD, Bureau of the Census, Washington, D.C. 20233, or call (301) 763-4100.

Table 1. SUMMARY OF PRODUCTION OF PRINCIPAL INORGANIC CHEMICALS: 1984 to 1986

(Short tons)

Month and year	Chlorine gas (28121 11) (100%)	Sodium hydroxide, total liquid (28123 50) (100%)	Titanium dioxide (28161 00) (commodity weight)	Hydrochloric acid (28194 41, 45,47) (100%)	Aluminum sulfate (28196 51) (17% Al_2O_3)	Sodium phosphate tripoly (28197 38) (100%)	Phosphorus elemental (28199 58) (100%)	Aluminum oxide (28195 00) (100%)
1986								
April	873,359	925,649	78,046	245,895	94,611	55,958	31,513	210,138
March	892,862	960,361	78,493	245,594	98,381	54,787	31,045	204,708
February	787,684	873,295	77,182	221,425	85,101	50,668	29,780	192,471
January	828,761	891,767	75,365	225,012	89,484	49,774	33,340	199,145
1985								
Total	10,464,919	10,959,042	814,014	2,776,795	1,003,224	606,915	358,848	2,820,836
December	875,365	907,005	74,722	213,972	77,468	39,932	26,735	184,016
November	779,105	834,995	66,903	202,357	79,179	43,023	28,757	204,273
October	849,359	907,637	67,543	242,724	86,007	52,565	29,810	201,826
September	845,829	898,876	72,443	237,597	82,384	49,644	25,108	228,956
August	843,715	885,453	65,279	216,652	90,029	52,829	29,375	214,538
July	904,624	942,525	71,441	236,881	89,201	52,457	29,123	237,703
June	929,061	934,805	73,370	245,792	86,697	53,143	33,412	232,845
May	926,768	962,824	67,181	245,827	84,662	54,226	32,464	239,412
April	926,223	975,295	68,350	235,086	81,275	52,454	33,537	265,123
March	907,945	954,367	63,030	262,536	89,931	57,236	32,441	284,887
February	828,991	875,243	61,518	225,917	73,941	47,529	26,531	239,713
January	847,934	880,017	62,234	211,971	82,450	51,877	31,555	287,344
1984								
Total	10,699,543	10,914,071	834,889	2,732,323	1,129,476	675,078	386,063	3,954,349
December	884,571	918,798	64,620	215,795	80,390	53,493	35,755	293,211
November	849,154	870,006	76,633	199,710	81,531	58,410	32,875	273,400
October	834,689	882,246	65,587	202,479	88,935	65,499	31,592	309,165
September	906,698	920,625	75,182	225,383	84,790	52,589	32,179	318,711
August	880,467	899,505	64,264	229,560	101,135	60,363	27,191	357,432
July	894,191	912,129	69,159	223,955	99,312	48,563	32,155	351,800
June	943,343	960,993	77,630	227,929	94,797	54,494	34,853	349,631
May	949,384	960,106	67,536	217,432	110,459	58,903	35,535	(S)
April	966,092	988,934	69,281	263,009	87,887	55,307	29,131	(S)

Note: Data for 1984 have been revised based on the comparison of figures from monthly report M28A with the 1984 annual report MA28A, Inorganic Chemicals, issued December 1985.

Production figures for chlorine gas and sodium hydroxide, total liquid have been revised for January, February, and March 1986.

(S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

Address inquiries concerning these figures to U.S. Department of Commerce, Bureau of the Census, Industry Division, Washington, D.C. 20233, or call Debbie Clemens, (301) 763-7807.

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Table 2. PRIMARY PRODUCTION AND STOCKS OF INORGANIC CHEMICALS

(Short tons)

Product code	Product description	April 1986		March 1986		April 1985	
		Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants
	Chlorine and alkalies:						
	Chlorine (100%):						
28121 11	Gas[1]	873,359	(NA)	a892,862	(NA)	a926,223	(NA)
28121 15	Liquid[2]	689,501	(NA)	r708,613	(NA)	548,048	(NA)
	Sodium hydroxide (caustic soda) (100%) (all processes):						
28123 50	Liquid[3]	925,649	(NA)	960,361	(NA)	a975,295	(NA)
28123 67	Dry (all forms)	16,079	(NA)	r19,118	(NA)	14,925	(NA)
28125 21	Potassium hydroxide (caustic potash) (88 to 92%), liquid[3]	(D)	(NA)	(D)	(NA)	20,887	(NA)
28125 30	Finished sodium bicarbonate (58% Na_2O)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28125 90 14745 11	Sodium carbonate, natural and synthetic (58%)[4]	611,186	384,568	743,418	r473,021	708,932	324,094
	Acids:						
	Hydrochloric (100%)	245,895	(NA)	245,594	(NA)	a235,086	(NA)
28194 41	From salt and acid	(5)	(NA)	(5)	(NA)	(5)	(NA)
28194 45	From chlorine and hydrogen	5 18,844	(NA)	5 a 20,512	(NA)	5 18,833	(NA)
28194 47	Byproduct and other	5 227,051	(NA)	5 a 225,082	(NA)	5 216,253	(NA)
	Hydrofluoric (100%):						
28194 61 28194 65	Produced and withdrawn from system (anhydrous, technical, and aqueous)[6]	11,863	(NA)	18,057	(NA)	17,293	(NA)
28194 66	Produced but not withdrawn from system	(D)	(NA)	(D)	(NA)	(D)	(NA)
28194 11	Boric acid (100% H_3BO_3), (ortho boric acid)	(D)	(D)	(D)	(D)	(D)	(D)
	Other chemicals:						
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3)	a210,138	a140,779	a204,708	a155,073	a265,123	(S)
28196 17	Aluminum chloride, anhydrous (100%)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28196 51	Aluminum sulfate (commercial) (17% aluminum oxide)[7]	94,611	(NA)	a98,381	(NA)	a81,275	(NA)
28199 12	Calcium carbide (commercial)	16,226	(NA)	19,919	(NA)	16,454	(NA)
28199 19	Calcium phosphates:						
	Monobasic (21% minimum P) (100%)	(S)	(S)	(S)	(S)	(NA)	(NA)
	Dibasic (18.5% minimum P) (100%)[8]	67,515	37,222	r66,075	35,120	59,547	27,762
	Tribasic (defluorinated phosphate rock) (18.0% minimum P):						
28742 71	Animal feed, grade (defluorinated phosphate rock) (100%)	21,263	18,227	27,007	21,025	24,440	21,031
28199 22	Other grades (100%)	(D)	(D)	(D)	(D)	(D)	(D)
	Carbon, activated[9]	8,335	10,893	8,533	10,216	4,931	8,969
28199 25	Granular carbons (dry weight)[10]	4,345	7,444	4,279	6,308	1,643	(D)
28199 27	Pulverized carbons (dry weight)	3,990	3,449	4,254	3,908	3,288	(D)
	Chrome colors:						
28163 15	Chrome yellow and orange (c.p.)	1,992	(NA)	2,374	(NA)	a1,746	(NA)
28163 17	Molybdate chrome orange (c.p.)	545	(NA)	635	(NA)	a526	(NA)
28199 39	Hydrogen peroxide (100% by weight)	12,282	(NA)	11,405	(NA)	13,041	(NA)
28199 58	Phosphorus, elemental, white (yellow) and red (technical)	31,513	(D)	31,045	(D)	33,537	(D)
28199 60	Phosphorus, oxychloride (100%)	a1,635	(NA)	2,592	(NA)	2,863	(NA)
28199 61	Phosphorus, pentasulfide (100%)	a4,753	(NA)	5,766	(NA)	6,511	(NA)
28199 63	Phosphorus, trichloride (chloride) (100%)	a6,530	(NA)	9,015	(NA)	8,391	(NA)
28197 18	Potassium pyrophosphate (tetrapotassium pyrophosphate) (anhydrous, 100%)	a1,407	(NA)	a1,633	(NA)	1,127	(NA)
28199 69	Silicon tetrachloride (silica) (100% $SiCl_4$)	a4,287	(NA)	a4,130	(NA)	(S)	(NA)
28197 21	Sodium metal (100%)	(D)	4,008	(D)	3,979	7,647	(D)
28199 33	Sodium bichromate and chromate (hydrous)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28197 27	Sodium chlorate (100%)	21,668	a6,901	20,974	a5,609	18,083	a8,956
29197 30	Sodium hydrosulfite (100%)	(D)	(NA)	(D)	(NA)	(S)	(NA)
	Sodium phosphates:						
28197 34	Tribasic (100%)	3,224	(NA)	3,106	(NA)	4,614	(NA)
28197 35	Tetrabasic (pyro) (100%)	2,127	(NA)	2,102	(NA)	2,087	(NA)
28197 36	Meta (100%)	2,877	(NA)	3,228	(NA)	2,840	(NA)
28197 38	Tripoly (100%)	55,958	(NA)	54,787	(NA)	58,241	(NA)
28197 41	Sodium silicate (soluble silicate glass, liquid and solid) (anhydrous)[11]	54,458	(NA)	61,589	(NA)	a65,008	(NA)
28197 42	Metasilicate pentahydrate (100%)	4,006	(NA)	3,901	(NA)	4,346	(NA)
28197 44	Metasilicate anhydrous (100%)	4,619	(NA)	5,465	(NA)	5,961	(NA)
	Sodium sulfate (100%)	69,128	(NA)	r69,606	(NA)	75,506	(NA)
28197 61	High purity	40,015	(NA)	r39,549	(NA)	38,392	(NA)
28197 66	Lower purity (99% or less) (includes Glaubers salt)	a29,113	(NA)	30,057	(NA)	37,114	(NA)
28161 00	Titanium dioxide (composite and pure) (commodity weight)[12]	78,046	71,441	78,493	74,539	64,631	71,705

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28A(86)-1, issued April 1986, for a discussion of estimation of missing reports): a20 percent or more of this item is estimated.

(D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. rRevised by 5 percent or more from previously published figures. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1]Production includes amounts liquefied.
[2]Production of liquid chlorine for January and February 1986 are revised as follows: 623,152 short tons and 641,849 short tons, respectively.
[3]Liquid production figures represent total production, including quantities later evaporated to solid caustic.
[4]Source: U.S. Bureau of Mines.
[5]Beginning in July 1985, "Hydrochloric acid from salt and acid" is combined with "Hydrochloric acid, byproduct and other".
[6]Excludes anhydrous used in aqueous.
[7]Excludes quantities produced and consumed in municipalities.
[8]Includes animal feed and other grades, but excludes superphosphate or other fertilizer materials.
[9]Excludes reactivated carbon.
[10]Includes pelleted carbon.
[11]Excludes amounts produced and consumed in making meta, ortho, and sesquisilicates.
[12]Represents total stocks of producing companies, including amounts held at locations other than producing plants.

Table 3. PRODUCTION OF INORGANIC CHEMICALS, BY STATE

(Short tons)

Geographic area	Aluminum sulfate, commercial (17% Al_2O_3)[1]	Sodium silicate (anhydrous)[2]	Hydrochloric acid (100% HCL)	Chlorine gas (100% Cl)[3]	Sodium hydroxide (100% NaOH) total liquid, all processes[4]
APRIL 1986					
United States	94,611	54,458	245,895	873,359	925,649
Alabama	(D)	(D)	(D)	52,282	51,156
California	(D)	(D)	7,204	(D)	(D)
Georgia	9,459	5,191	(D)	17,351	20,275
Illinois	(D)	(D)	11,704	-	-
Kentucky	-	-	(D)	(D)	(D)
Louisiana	12,530	(D)	70,823	314,551	349,365
Michigan	(D)	-	3,586	-	-
New Jersey	(D)	(D)	(D)	-	-
New York	-	(D)	(D)	43,555	42,483
Tennessee	5,224	(D)	-	(D)	(D)
Texas	(D)	(D)	67,769	247,298	264,373
Washington	5,112	-	3,407	45,708	49,918
West Virginia	(D)	-	(D)	(D)	(D)
All other states	40,800	12,341	17,360	77,448	66,668
MARCH 1986					
United States	98,381	61,589	245,594	892,862	960,361
Alabama	(D)	(D)	(D)	53,276	53,290
California	(D)	(D)	6,202	(D)	(D)
Georgia	9,146	5,773	(D)	18,670	21,621
Illinois	(D)	(D)	10,729	-	-
Kentucky	-	-	35,870	(D)	(D)
Louisiana	11,707	(D)	66,460	319,912	356,139
Michigan	(D)	-	2,523	-	-
New Jersey	(D)	(D)	(D)	-	-
New York	-	(D)	(D)	43,177	41,779
Tennessee	5,124	(D)	-	(D)	(D)
Texas	(D)	(D)	60,369	264,218	285,697
Washington	4,465	-	3,254	39,973	44,634
West Virginia	(D)	-	(D)	(D)	(D)
All other states	40,011	15,570	32,025	72,606	68,526

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. published figures.

[1] Excludes quantities produced and consumed in municipalities.
[2] Excludes amounts produced and consumed in making meta, ortho, and sesquisilicates.
[3] Production includes amount liquefied.
[4] Includes quantities later evaporated to solid.

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Table 4. PRODUCTION, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF SELECTED INORGANIC CHEMICALS: MARCH 1986

(Short tons)

Product code	Product description	Quantity produced	Exports of domestic merchandise[1]	Imports for consumption[2]	Apparent consumption[3]	Percent imports to apparent consumption
28161 00	Titanium dioxide (composite and pure).....	71,441	9,075	16,983	45,383	37.4
	Hydrochloric acid:					
28194 41	From salt and acid.....					
28194 45	From chlorine and hydrogen.....	245,594	1,542	13,711	257,763	5.3
28194 47	By-product and other.....					
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3).....	204,708	11,131	412,769	606,346	68.1
28196 51	Aluminum sulfate (commercial).....	98,381	207	2,001	100,175	2.0
28197 27	Sodium chlorate.....	20,974	-	17,690	38,664	45.8
28197 30	Sodium hydrosulfite.....	(D)	1,295	381	(D)	(D)
	Sodium sulfates (anhydrous 100%):					
28197 61	High purity.....					
28197 66	Lower purity (99% or less) (including Glauber's salt).....	69,606	8,508	14,561	75,659	19.2
28199 12	Calcium carbide (commercial).....	19,919	251	1,438	21,106	6.8
28199 58	Phosphorus elemental.....	31,045	1,391	35	29,679	0.1

Note: This table includes only products relative to this report which are directly comparable for imports, exports, and domestic output (see table 5 in the January 1986 report, M28A(86)-1, issued April 1986).

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies.

[1]Source: Bureau of the Census report EX 546, U.S. Exports.
[2]Source: Bureau of the Census report IM 145-X, U.S. Imports for Consumption and General Imports.
[3]Apparent consumption represents new domestic supply and is derived by subtracting exports from the total of manufactures' production plus imports.

M 28 A(86)-5

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BUREAU OF THE CENSUS

MAY 1986

M28A(86)-5
Issued July 1986

The statistics in this publication are based on a survey of manufacturers and represent total U.S. production and stocks of specified inorganic chemicals. Estimates are included for companies for which reports were not received in time for tabulation. A description of the survey methodology and related information may be found in the January 1986 report for this series, M28A(86)-1, issued April 1986.

This report is available electronically in CENDATA, the Bureau's online information service, through a commercial vendor. The electronic version of this report will be available approximately one week earlier than the printed report. The CENDATA report for June 1986 will be released on or about August 11, 1986. For further information, contact Customer Service, DUSD, Bureau of the Census, Washington, D.C. 20233, or call (301) 763-4100.

Table 1. SUMMARY OF PRODUCTION OF PRINCIPAL INORGANIC CHEMICALS: 1984 to 1986

(Short tons)

Month and year	Chlorine gas (28121 11) (100%)	Sodium hydroxide, total liquid (28123 50) (100%)	Titanium dioxide (28161 00) (commodity weight)	Hydrochloric acid (28194 41, 45,47) (100%)	Aluminum sulfate (28196 51) (17% Al_2O_3)	Sodium phosphate tripoly (28197 38) (100%)	Phosphorus elemental (28199 58) (100%)	Aluminum oxide (28195 00) (100%)
1986								
May	897,625	946,466	87,221	273,712	97,534	55,887	31,671	222,154
April	873,359	925,649	78,046	261,978	97,079	55,958	31,513	210,138
March	892,862	960,361	78,493	245,594	98,381	54,787	31,045	204,708
February	787,684	873,295	77,182	221,425	85,101	50,668	29,780	192,471
January	828,761	891,767	75,365	225,012	89,484	49,774	33,340	199,145
1985								
Total	10,464,919	10,959,042	814,014	2,776,795	1,003,224	606,915	358,848	2,820,836
December	875,365	907,005	74,722	213,972	77,468	39,932	26,735	184,016
November	779,105	834,995	66,903	202,357	79,179	43,023	28,757	204,273
October	849,359	907,637	67,543	242,724	86,007	52,565	29,810	201,826
September	845,829	898,876	72,443	237,597	82,384	49,644	25,108	228,956
August	843,715	885,453	65,279	216,652	90,029	52,829	29,375	214,538
July	904,624	942,525	71,441	236,881	89,201	52,457	29,123	237,703
June	929,061	934,805	73,370	245,792	86,697	53,143	33,412	232,845
May	926,768	962,824	67,181	245,827	84,662	54,226	32,464	239,412
April	926,223	975,295	68,350	235,086	81,275	52,454	33,537	265,123
March	907,945	954,367	63,030	262,536	89,931	57,236	32,441	284,887
February	828,991	875,243	61,518	225,917	73,941	47,529	26,531	239,713
January	847,934	880,017	62,234	211,971	82,450	51,877	31,555	287,544
1984								
Total	10,699,543	10,914,071	834,889	2,732,323	1,129,476	675,078	386,063	3,954,349
December	884,571	918,798	64,620	215,795	80,390	53,493	35,755	293,211
November	849,154	870,006	76,633	199,710	81,531	58,410	32,875	273,400
October	834,689	882,246	65,587	202,479	88,935	65,499	31,592	309,165
September	906,698	920,625	75,182	225,383	84,790	52,589	32,179	318,711
August	880,467	899,505	64,264	229,560	101,135	60,363	27,191	357,432
July	894,191	912,129	69,159	223,955	99,312	48,563	32,155	351,800
June	943,343	960,993	77,630	227,929	94,797	54,494	34,853	349,631
May	949,384	960,106	67,536	217,432	110,459	58,903	35,535	(S)

Note: Data for 1984 have been revised based on the comparison of figures from monthly report M28A with the 1984 annual report MA28A, Inorganic Chemicals, issued December 1985.

(S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

Address inquiries concerning these figures to U.S. Department of Commerce, Bureau of the Census, Industry Division, Washington, D.C. 20233, or call Debbie Clemens, (301) 763-7807.

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Table 2. PRIMARY PRODUCTION AND STOCKS OF INORGANIC CHEMICALS

(Short tons)

Product code	Product description	May 1986		April 1986		May 1985	
		Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants
	Chlorine and alkalies:						
	Chlorine (100%):						
28121 11	Gas[1]	897,625	(NA)	873,359	(NA)	926,768	(NA)
28121 15	Liquid	562,547	(NA)	689,501	(NA)	524,991	(NA)
	Sodium hydroxide (caustic soda) (100%) (all processes):						
28123 50	Liquid[2]	946,466	(NA)	925,649	(NA)	962,824	(NA)
28123 67	Dry (all forms)	16,690	(NA)	16,079	(NA)	22,142	(NA)
28125 21	Potassium hydroxide (caustic potash) (88 to 92%), liquid[2]	(D)	(NA)	(D)	(NA)	20,834	(NA)
28125 30	Finished sodium bicarbonate (58% Na_2O)	(D)	(NA)	(D)	(NA)	a28,871	(NA)
28125 90 14745 11	Sodium carbonate, natural and synthetic (58%)[3]	795,046	354,123	611,186	384,568	753,457	339,178
	Acids:						
	Hydrochloric (100%)	273,712	(NA)	r261,978	(NA)	245,827	(NA)
28194 41	From salt and acid	(4)	(NA)	(4)	(NA)	(4)	(NA)
28194 45	From chlorine and hydrogen	15,899	(NA)	18,844	(NA)	19,503	(NA)
28194 47	Byproduct and other	257,813	(NA)	4 r243,134	(NA)	4 226,324	(NA)
	Hydrofluoric (100%):						
28194 61 28194 65	Produced and withdrawn from system (anhydrous, technical, and aqueous)[5]	13,163	(NA)	11,843	(NA)	15,491	(NA)
28194 66	Produced but not withdrawn from system	(D)	(NA)	(D)	(NA)	(D)	(NA)
28194 11	Boric acid (100% H_3BO_3), (ortho boric acid)	(D)	(D)	(D)	(D)	(D)	(D)
	Other chemicals:						
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3)	a222,154	(S)	a210,138	(S)	a239,412	(S)
28196 17	Aluminum chloride, anhydrous (100%)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28196 51	Aluminum sulfate (commercial) (17% aluminum oxide)[6]	97,534	(NA)	97,079	(NA)	a84,662	(NA)
28199 12	Calcium carbide (commercial)	19,139	(NA)	16,226	(NA)	19,090	(NA)
28199 19	Calcium phosphates:						
	Monobasic (21% minimum P) (100%)	31,664	15,243	43,295	20,790	(NA)	(NA)
	Dibasic (18.5% minimum P) (100%)[7]	39,635	31,854	r45,881	32,499	68,517	29,636
	Tribasic (defluorinated phosphate rock) (18.0% minimum P):						
28742 71	Animal feed, grade (defluorinated phosphate rock) (100%)	24,038	18,068	21,263	18,227	23,756	16,753
28199 22	Other grades (100%)	(D)	(D)	(D)	(D)	(D)	(D)
	Carbon, activated[8]	8,388	11,516	8,335	10,893	6,066	8,796
28199 25	Granular carbons (dry weight)[9]	4,014	7,550	4,345	7,444	1,864	(D)
28199 27	Pulverized carbons (dry weight)	4,374	3,966	3,990	3,449	4,202	(D)
	Chrome colors:						
28163 15	Chrome yellow and orange (c.p.)	1,876	(NA)	r2,147	(NA)	a2,876	(NA)
28163 17	Molybdate chrome orange (c.p.)	1,113	(NA)	545	(NA)	a744	(NA)
28199 39	Hydrogen peroxide (100% by weight)	12,452	(NA)	12,282	(NA)	10,311	(NA)
28199 58	Phosphorus, elemental, white (yellow) and red (technical)	31,671	12,069	31,513	(D)	32,464	10,379
28199 60	Phosphorus, oxychloride (100%)	2,393	(NA)	r1,826	(NA)	2,468	(NA)
28199 61	Phosphorus, pentasulfide (100%)	6,363	(NA)	r5,037	(NA)	6,331	(NA)
28199 63	Phosphorus, trichloride (chloride) (100%)	7,994	(NA)	r7,049	(NA)	8,025	(NA)
28197 18	Potassium pyrophosphate (tetrapotassium pyrophosphate) (anhydrous, 100%)	1,391	(NA)	1,407	(NA)	2,658	(NA)
28199 69	Silicon tetrachloride (silter) (100% $SiCl_4$)	a3,779	(NA)	(S)	(NA)	(S)	(NA)
28197 21	Sodium metal (100%)	(D)	4,017	(D)	4,008	6,024	4,449
28199 33	Sodium bichromate and chromate (hydrous)	(D)	(NA)	(D)	(NA)	11,606	(NA)
28197 27	Sodium chlorate (100%)	22,753	9,850	21,668	a6,901	21,152	10,833
29197 30	Sodium hydrosulfite (100%)	(D)	(NA)	(D)	(NA)	(D)	(NA)
	Sodium phosphates:						
28197 34	Tribasic (100%)	2,616	(NA)	3,224	(NA)	(D)	(NA)
28197 35	Tetrabasic (pyro) (100%)	3,269	(NA)	2,497	(NA)	2,226	(NA)
28197 36	Meta (100%)	2,738	(NA)	2,877	(NA)	2,781	(NA)
28197 38	Tripoly (100%)	55,887	(NA)	55,958	(NA)	54,226	(NA)
28197 41	Sodium silicate (soluble silicate glass, liquid and solid) (anhydrous)[10]	80,809	(NA)	54,458	(NA)	66,203	(NA)
28197 42	Metasilicate pentahydrate (100%)	3,633	(NA)	4,006	(NA)	4,083	(NA)
28197 44	Metasilicate anhydrous (100%)	4,743	(NA)	4,619	(NA)	5,299	(NA)
	Sodium sulfate (100%)	69,295	(NA)	68,778	(NA)	r74,368	(NA)
28197 61	High purity	39,301	(NA)	39,665	(NA)	37,736	(NA)
28197 66	Lower purity (94% or less) (includes Glaubers salt)	29,994	(NA)	a29,113	(NA)	r36,632	(NA)
28161 00	Titanium dioxide (composite and pure) (commodity weight)[11]	87,221	71,413	78,046	71,441	67,181	61,752

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28A(86)-1, issued April 1986, for a discussion of estimation of missing reports): a20 percent or more of this item is estimated.

(D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. rRevised by 5 percent or more from previously published figures. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1]Production includes amounts liquefied.
[2]Liquid production figures represent total production, including quantities later evaporated to solid caustic.
[3]Source: U.S. Bureau of Mines.
[4]Beginning in July 1985, "Hydrochloric acid from salt and acid" is combined with "Hydrochloric acid, byproduct and other".
[5]Excludes anhydrous used in aqueous.
[6]Excludes quantities produced and consumed in municipalities.
[7]Includes animal feed and other grades, but excludes superphosphate or other fertilizer materials.
[8]Excludes reactivated carbon.
[9]Includes pelleted carbon.
[10]Excludes amounts produced and consumed in making meta, ortho, and sesquisilicates.
[11]Represents total stocks of producing companies, including amounts held at locations other than producing plants.

Table 3. PRODUCTION OF INORGANIC CHEMICALS, BY STATE

(Short tons)

Geographic area	Aluminum sulfate, commercial (17% Al_2O_3)[1]	Sodium silicate (anhydrous)[2]	Hydrochloric acid (100% HCL)	Chlorine gas (100% Cl)[3]	Sodium hydroxide (100% NaOH) total liquid, all processes[4]
MAY 1986					
United States	97,534	80,809	273,712	897,625	946,466
Alabama	(D)	(D)	(D)	47,604	45,698
California	6,076	(D)	7,668	(D)	(D)
Georgia	9,347	5,543	(D)	18,222	20,751
Illinois	(D)	(D)	11,097	-	-
Kentucky	(D)	-	31,708	(D)	(D)
Louisiana	11,557	(D)	73,931	332,043	368,826
Michigan	(D)	-	4,041	-	-
New Jersey	(D)	(D)	(D)	-	-
New York	-	(D)	(D)	45,060	42,227
Tennessee	5,194	(D)	-	(D)	(D)
Texas	(D)	(D)	80,303	257,638	276,411
Washington	5,295	(D)	(D)	41,246	44,132
West Virginia	(D)	-	(D)	(D)	(D)
All other states	42,225	19,112	29,812	81,588	68,625
APRIL 1986					
United States	r97,079	54,458	r261,978	873,359	925,649
Alabama	(D)	(D)	(D)	52,282	51,156
California	4,913	(D)	7,204	(D)	(D)
Georgia	9,459	5,191	(D)	17,351	20,275
Illinois	(D)	(D)	10,910	-	-
Kentucky	(D)	-	(D)	(D)	(D)
Louisiana	11,795	(D)	70,823	314,551	349,365
Michigan	(D)	-	4,009	-	-
New Jersey	(D)	(D)	(D)	-	-
New York	-	(D)	(D)	43,555	42,483
Tennessee	5,224	(D)	-	(D)	(D)
Texas	(D)	(D)	67,769	247,298	264,373
Washington	5,112	-	(D)	45,708	49,918
West Virginia	(D)	-	(D)	(D)	(D)
All other states	41,944	12,341	35,867	77,448	66,668

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. rRevised by 5 percent or more from previously published figures.

[1] Excludes quantities produced and consumed in municipalities.
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Table 4. PRODUCTION, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF SELECTED INORGANIC CHEMICALS: APRIL 1986

(Short tons)

Product code	Product description	Quantity produced	Exports of domestic merchandise[1]	Imports for consumption[2]	Apparent consumption[3]	Percent imports to apparent consumption
28161 00	Titanium dioxide (composite and pure).....	78,046	9,970	16,301	84,377	19.3
	Hydrochloric acid:					
28194 41	From salt and acid.....	261,978	1,479	4,210	264,709	1.6
28194 45	From chlorine and hydrogen.....					
28194 47	By-product and other.....					
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3).....	210,138	55,071	317,951	473,018	67.2
28196 51	Aluminum sulfate (commercial).....	97,079	195	1,594	98,478	1.6
28197 27	Sodium chlorate.....	21,668	535	16,153	37,286	43.3
28197 30	Sodium hydrosulfite.....	(D)	1,182	377	(D)	(D)
	Sodium sulfates (anhydrous 100%):					
28197 61	High purity.....	68,778	6,254	18,854	81,378	23.2
28197 66	Lower purity (99% or less) (including Glauber's salt).....					
28199 12	Calcium carbide (commercial).....	16,226	144	1,637	17,719	9.2
28199 58	Phosphorus elemental.....	31,513	1,849	65	29,729	0.2

Note: This table includes only products relative to this report which are directly comparable for imports, exports, and domestic output (see table 5 in the January 1986 report, M28A(86)-1, issued April 1986).

(D) Data withheld to avoid disclosing figures for individual companies.

[1]Source: Bureau of the Census report EX 546, U.S. Exports.
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M28A(86)-6

CURRENT INDUSTRIAL REPORTS

Inorganic Chemicals

U.S. Department of Commerce
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JUNE 1986

M28A(86)-6
Issued August 1986

The statistics in this publication are based on a survey of manufacturers and represent total U.S. production and stocks of specified inorganic chemicals. Estimates are included for companies for which reports were not received in time for tabulation. A description of the survey methodology and related information may be found in the January 1986 report for this series, M28A(86)-1, issued April 1986.

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(Short tons)

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1986								
June	896,958	946,138	73,477	274,602	106,463	51,239	27,850	208,725
May	899,846	939,691	81,843	299,266	97,534	55,887	31,671	222,154
April	873,339	925,649	78,150	261,978	97,079	55,958	31,513	210,138
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March	907,945	954,367	63,030	262,536	89,931	57,236	32,441	284,887
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1984								
Total	10,699,543	10,914,071	834,889	2,732,323	1,129,476	675,078	386,063	3,954,349
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October	834,689	882,246	65,587	202,479	88,935	65,499	31,592	309,165
September	906,698	920,625	75,182	225,383	84,790	52,589	32,179	318,711
August	880,467	899,505	64,264	229,560	101,135	60,363	27,191	357,432
July	894,191	912,129	69,159	223,955	99,312	48,563	32,155	351,800
June	943,343	960,993	77,630	227,929	94,797	54,494	34,853	349,631

Note: Data for 1984 have been revised based on the comparison of figures from monthly report M28A with the 1984 annual report MA28A, Inorganic Chemicals, issued December 1985.

[1] Production of titanium dioxide for January-May 1986 has been revised due to reporting errors.

Address inquiries concerning these figures to U.S. Department of Commerce, Bureau of the Census, Industry Division, Washington, D.C. 20233, or call Debbie Clemens, (301) 763-7807.
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Table 2. PRIMARY PRODUCTION AND STOCKS OF INORGANIC CHEMICALS

(Short tons)

Product code	Product description	June 1986		May 1986		June 1985	
		Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants
	Chlorine and alkalies:						
	Chlorine (100%):						
28121 11	Gas[1]	896,958	(NA)	r899,846	(NA)	929,061	(NA)
28121 15	Liquid	705,899	(NA)	r707,848	(NA)	541,863	(NA)
	Sodium hydroxide (caustic soda) (100%) (all processes):						
28123 50	Liquid[2]	946,138	(NA)	939,691	(NA)	934,805	(NA)
28123 67	Dry (all forms)	15,591	(NA)	16,412	(NA)	19,063	(NA)
28125 21	Potassium hydroxide (caustic potash) (88 to 92%), liquid[2]	(D)	(NA)	(D)	(NA)	18,561	(NA)
28125 30	Finished sodium bicarbonate (58% Na_2O)	(D)	(NA)	(D)	(NA)	a31,193	(NA)
28125 90 14745 11	Sodium carbonate, natural and synthetic (58%)[3]	761,881	319,011	795,046	r318,177	690,512	r244,944
	Acids:						
	Hydrochloric (100%)	274,602	(NA)	r299,266	(NA)	245,792	(NA)
28194 41	From salt and acid	([4])	(NA)	([4])	(NA)	([4])	(NA)
28194 45	From chlorine and hydrogen	16,256	(NA)	15,899	(NA)	18,976	(NA)
28194 47	Byproduct and other	258,346	(NA)	283,367	(NA)	[4]226,816	(NA)
	Hydrofluoric (100%):						
28194 61 28194 65	Produced and withdrawn from system (anhydrous, technical, and aqueous)[5]	15,137	(NA)	13,163	(NA)	16,497	(NA)
28194 66	Produced but not withdrawn from system	(D)	(NA)	(D)	(NA)	(D)	(NA)
28194 11	Boric acid (100% H_3BO_3), (ortho boric acid)	(D)	(D)	(D)	(D)	(D)	(D)
	Other chemicals:						
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3)	a208,725	a122,457	a222,154	a94,702	a232,845	(S)
28196 17	Aluminum chloride, anhydrous (100%)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28196 51	Aluminum sulfate (commercial) (17% aluminum oxide)[6]	a106,463	(NA)	97,534	(NA)	a86,697	(NA)
28199 12	Calcium carbide (commercial)	16,113	(NA)	19,139	(NA)	24,880	(NA)
28199 19	Calcium phosphates:						
	Monobasic (21% minimum P) (100%)	43,924	21,289	31,664	15,243	(NA)	(NA)
	Dibasic (18.5% minimum P) (100%)[7]	44,282	36,103	39,635	31,854	68,982	39,193
	Tribasic (defluorinated phosphate rock) (18.0% minimum P):						
28742 71	Animal feed, grade (defluorinated phosphate rock) (100%)	27,641	22,198	24,038	18,068	24,993	21,187
28199 22	Other grades (100%)	(D)	(D)	(D)	(D)	(D)	(D)
	Carbon, activated[8]	7,350	10,088	8,388	11,516	5,469	8,560
28199 25	Granular carbons (dry weight)[9]	2,935	6,467	4,014	7,550	1,660	(D)
28199 27	Pulverized carbons (dry weight)	4,385	3,621	4,374	3,966	3,809	(D)
	Chrome colors:						
28163 15	Chrome yellow and orange (c.p.)	2,211	(NA)	1,876	(NA)	2,670	(NA)
28163 17	Molybdate chrome orange (c.p.)	564	(NA)	r473	(NA)	(D)	(NA)
28199 39	Hydrogen peroxide (100% by weight)	11,484	(NA)	12,452	(NA)	10,168	(NA)
28199 58	Phosphorus, elemental, white (yellow) and red (technical)	27,850	10,633	31,671	12,069	33,412	12,518
28199 60	Phosphorus, oxychloride (100%)	2,111	(NA)	2,393	(NA)	1,889	(NA)
28199 61	Phosphorus, pentasulfide (100%)	6,165	(NA)	6,363	(NA)	5,331	(NA)
28199 63	Phosphorus, trichloride (chloride) (100%)	8,126	(NA)	7,994	(NA)	7,540	(NA)
28197 18	Potassium pyrophosphate (tetrapotassium pyrophosphate) (anhydrous, 100%)	1,936	(NA)	1,391	(NA)	1,382	(NA)
28199 69	Silicon tetrachloride (siltet) (100% $SiCl_4$)	(S)	(NA)	(S)	(NA)	(S)	(NA)
28197 21	Sodium metal (100%)	(D)	(D)	(D)	4,017	6,090	4,646
28199 33	Sodium bichromate and chromate (hydrous)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28197 27	Sodium chlorate (100%)	21,090	12,777	22,753	9,850	20,263	10,233
29197 30	Sodium hydrosulfite (100%)	(D)	(NA)	(D)	(NA)	(D)	(NA)
	Sodium phosphates:						
28197 34	Tribasic (100%)	2,609	(NA)	2,616	(NA)	4,131	(NA)
28197 35	Tetrabasic (pyro) (100%)	1,807	(NA)	3,269	(NA)	1,499	(NA)
28197 36	Meta (100%)	3,251	(NA)	2,738	(NA)	3,563	(NA)
28197 38	Tripoly (100%)	51,239	(NA)	55,887	(NA)	53,143	(NA)
28197 41	Sodium silicate (soluble silicate glass, liquid and solid) (anhydrous)[10]	71,119	(NA)	80,809	(NA)	63,174	(NA)
28197 42	Metasilicate pentahydrate (100%)	3,350	(NA)	3,633	(NA)	3,625	(NA)
28197 44	Metasilicate anhydrous (100%)	3,443	(NA)	4,743	(NA)	4,196	(NA)
	Sodium sulfate (100%)	69,265	(NA)	68,728	(NA)	r68,259	(NA)
28197 61	High purity	39,495	(NA)	38,734	(NA)	37,056	(NA)
28197 66	Lower purity (99% or less) (includes Glaubers salt)	29,770	(NA)	29,994	(NA)	r31,203	(NA)
28161 00	Titanium dioxide (composite and pure) (commodity weight)[11]	73,477	[12]54,821	r81,843	[12] r69,406	73,370	56,079

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28A(86)-1, issued April 1986, for a discussion of estimation of missing reports): a20 percent or more of this item is estimated.

(D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. rRevised by 5 percent or more from previously published figures. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1]Production includes amounts liquefied.
[2]Liquid production figures represent total production, including quantities later evaporated to solid caustic.
[3]Source: U.S. Bureau of Mines.
[4]Beginning in July 1985, "Hydrochloric acid from salt and acid" is combined with "Hydrochloric acid, byproduct and other".
[5]Excludes anhydrous used in aqueous.
[6]Excludes quantities produced and consumed in municipalities.
[7]Includes animal feed and other grades, but excludes superphosphate or other fertilizer materials.
[8]Excludes reactivated carbon.
[9]Includes pelleted carbon.
[10]Excludes amounts produced and consumed in making meta, ortho, and sesquisilicates.
[11]Represents total stocks of producing companies, including amounts held at locations other than producing plants.
[12]Titanium dioxide stocks figures are revised for January-April 1986 as follows: 64,799; 68,432; 72,512; and 69,537 short tons, respectively.

Table 3. PRODUCTION OF INORGANIC CHEMICALS, BY STATE

(Short tons)

Geographic area	Aluminum sulfate, commercial ($17\% Al_2O_3$)[1]	Sodium silicate (anhydrous)[2]	Hydrochloric acid (100% HCL)	Chlorine gas (100% Cl)[3]	Sodium hydroxide (100% NaOH) total liquid, all processes[4]
JUNE 1986					
United States	106,463	71,119	274,602	896,958	946,138
Alabama	(D)	(D)	(D)	52,654	52,155
California	6,574	(D)	5,973	(D)	(D)
Georgia	10,132	4,763	(D)	17,835	20,513
Illinois	(D)	(D)	12,030	-	-
Kentucky	(D)	-	(D)	(D)	(D)
Louisiana	11,600	8,267	a75,517	345,154	378,793
Michigan	(D)	-	3,493	-	-
New Jersey	(D)	(D)	(D)	-	-
New York	-	-	(D)	42,665	39,014
Tennessee	(S)	(D)	-	(D)	(D)
Texas	1,705	(D)	86,051	245,132	259,426
Washington	5,500	(D)	(D)	40,722	46,598
West Virginia	(D)	-	7,399	(D)	(D)
All other states	46,676	21,835	65,623	77,986	69,237
MAY 1986					
United States	97,534	80,809	r299,266	899,846	939,691
Alabama	(D)	(D)	(D)	47,604	45,698
California	6,076	(D)	6,961	(D)	(D)
Georgia	9,347	5,543	(D)	18,222	20,751
Illinois	(D)	(D)	11,749	-	-
Kentucky	(D)	-	31,708	(D)	(D)
Louisiana	11,557	(D)	a77,303	337,719	368,962
Michigan	(D)	-	3,939	-	-
New Jersey	(D)	(D)	(D)	-	-
New York	-	(D)	(D)	45,060	42,227
Tennessee	5,208	(D)	-	(D)	(D)
Texas	(D)	(D)	r102,864	255,328	r269,053
Washington	5,295	(D)	(D)	41,246	44,132
West Virginia	(D)	-	(D)	(D)	(D)
All other states	42,225	19,112	r61,298	81,588	68,625

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28A(86)-1, issued April 1986, for a discussion of estimation of missing reports): a20 percent or more of this item is estimated.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. rRevised by 5 percent or more from previously published figures. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1] Excludes quantities produced and consumed in municipalities.
[2] Excludes amounts produced and consumed in making meta, ortho, and sesquisilicates.
[3] Production includes amount liquefied.
[4] Includes quantities later evaporated to solid.

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Table 4. PRODUCTION, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF SELECTED INORGANIC CHEMICALS: MAY 1986

(Short tons)

Product code	Product description	Quantity produced	Exports of domestic merchandise[1]	Imports for consumption[2]	Apparent consumption[3]	Percent imports to apparent consumption
28161 00	Titanium dioxide (composite and pure)	81,843	7,613	14,422	88,652	16.3
	Hydrochloric acid:					
28194 41	From salt and acid	299,266	1,373	9,030	306,923	2.9
28194 45	From chlorine and hydrogen					
28194 47	By-product and other					
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3)	222,154	57,925	438,143	602,372	72.7
28196 51	Aluminum sulfate (commercial)	97,534	96	6,306	103,744	4.8
28197 27	Sodium chlorate	22,753	14	16,093	38,832	41.4
28197 30	Sodium hydrosulfite	(D)	1,592	419	(D)	(D)
	Sodium sulfates (anhydrous 100%):					
28197 61	High purity	68,728	12,024	14,750	71,454	20.6
28197 66	Lower purity (99% or less) (including Glauber's salt)					
28199 12	Calcium carbide (commercial)	19,139	63	1,618	20,694	7.8
28199 58	Phosphorus elemental	31,671	2,209	307	29,769	1.0

Note: This table includes only products relative to this report which are directly comparable for imports, exports, and domestic output (see table 5 in the January 1986 report, M28A(86)-1, issued April 1986).

(D) Data withheld to avoid disclosing figures for individual companies.

[1]Source: Bureau of the Census report EX 546, U.S. Exports.
[2]Source: Bureau of the Census report IM 145-X, U.S. Imports for Consumption and General Imports.
[3]Apparent consumption represents new domestic supply and is derived by subtracting exports from the total of manufactures' production plus imports.

M28A(86)-7

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JULY 1986

M28A(86)-7
Issued September 1986

The statistics in this publication are based on a survey of manufacturers and represent total U.S. production and stocks of specified inorganic chemicals. Estimates are included for companies for which reports were not received in time for tabulation. A description of the survey methodology and related information may be found in the January 1986 report for this series, M28A(86)-1, issued April 1986.

This report is available electronically in CENDATA, the Bureau's online information service, through a commercial vendor. The electronic version of this report will be available approximately one week earlier than the printed report. The CENDATA report for August 1986 will be released on or about October 15, 1986. For further information, contact Customer Service, DUSD, Bureau of the Census, Washington, D.C. 20233, or call (301) 763-4100.

Table 1. SUMMARY OF PRODUCTION OF PRINCIPAL INORGANIC CHEMICALS: 1984 to 1986

(Short tons)

Month and year	Chlorine gas (28121 11) (100%)	Sodium hydroxide, total liquid (28123 50) (100%)	Titanium dioxide (28161 00) (commodity wieght)	Hydrochloric acid (28194 41, 45,47) (100%)	Aluminum sulfate (28196 51) (17% Al_2O_3)	Sodium phosphate tripoly (28197 38) (100%)	Phosphorus elemental (28199 58) (100%)	Aluminum oxide (28195 00) (100%)
1986								
July	906,624	943,061	79,848	279,600	112,504	46,073	29,770	159,081
June	896,958	946,138	73,477	274,602	106,463	51,239	27,850	r139,962
May	899,846	939,691	81,843	299,266	97,534	55,887	31,671	222,154
April	873,359	925,649	78,150	261,978	97,079	55,958	31,513	210,138
March	892,862	960,361	72,671	245,594	98,381	54,787	31,045	204,708
February	787,684	873,295	71,429	221,425	85,101	50,668	29,780	192,471
January	828,761	891,767	75,981	225,012	89,484	49,774	33,340	199,145
1985								
Total	10,464,919	10,959,042	814,014	2,776,795	1,003,224	606,915	358,848	2,820,836
December	875,365	907,005	74,722	213,972	77,468	39,932	26,735	184,016
November	779,105	834,995	66,903	202,357	79,179	43,023	28,757	204,273
October	849,359	907,637	67,543	242,724	86,007	52,565	29,810	201,826
September	845,829	898,876	72,443	237,597	82,384	49,644	25,108	228,956
August	843,715	885,453	65,279	216,652	90,029	52,829	29,375	214,538
July	904,624	942,525	71,441	236,881	89,201	52,457	29,123	237,703
June	929,061	934,805	73,370	245,792	86,697	53,143	33,412	232,845
May	926,768	962,824	67,181	245,827	84,662	54,226	32,464	239,412
April	926,223	975,295	68,350	235,086	81,275	52,454	33,537	265,123
March	907,945	954,367	63,030	262,536	89,931	57,236	32,441	284,887
February	828,991	875,243	61,518	225,917	73,941	47,529	26,531	239,713
January	847,934	880,017	62,234	211,971	82,450	51,877	31,555	287,544
1984								
Total	10,699,543	10,914,071	834,889	2,732,323	1,129,476	675,078	386,063	3,954,349
December	884,571	918,798	64,620	215,795	80,390	53,493	35,755	293,211
November	849,154	870,006	76,633	199,710	81,531	58,410	32,875	273,400
October	834,689	882,246	65,587	202,479	88,935	65,499	31,592	309,165
September	906,698	920,625	75,182	225,383	84,790	52,589	32,179	318,711
August	880,467	899,505	64,264	229,560	101,135	60,363	27,191	357,432
July	894,191	912,129	69,159	223,955	99,312	48,563	32,155	351,800

Note: Data for 1984 have been revised based on the comparison of figures from monthly report M28A with the 1984 annual report MA28A, Inorganic Chemicals, issued December 1985.

rRevised by 5 percent or more from previously published figures.

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Table 2. PRIMARY PRODUCTION AND STOCKS OF INORGANIC CHEMICALS

(Short tons)

Product code	Product description	July 1986		June 1986		July 1985	
		Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants
	Chlorine and alkalies:						
	Chlorine (100%):						
28121 11	Gas[1]	a906,624	(NA)	896,958	(NA)	a904,624	(NA)
28121 15	Liquid	a712,852	(NA)	705,899	(NA)	523,563	(NA)
	Sodium hydroxide (caustic soda) (100%) (all processes):						
28123 50	Liquid[2]	a943,061	(NA)	946,138	(NA)	a942,525	(NA)
28123 67	Dry (all forms)	17,102	(NA)	15,591	(NA)	19,353	(NA)
28125 21	Potassium hydroxide (caustic potash) (88 to 92%), liquid[2]	(D)	(NA)	(D)	(NA)	15,264	(NA)
28125 30	Finished sodium bicarbonate (58% Na_2O)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28125 90	Sodium carbonate, natural and synthetic						
14745 11	(58%)[3]	728,264	334,456	761,881	319,011	710,167	318,706
	Acids:						
	Hydrochloric (100%)	279,600	(NA)	274,602	(NA)	a236,881	(NA)
28194 41	From salt and acid	(4)	(NA)	(4)	(NA)	(4)	(NA)
28194 45	From chlorine and hydrogen	14,895	(NA)	16,256	(NA)	18,315	(NA)
28194 47	Byproduct and other	264,705	(NA)	258,346	(NA)	4 a218,566	(NA)
	Hydrofluoric (100%):						
28194 61	Produced and withdrawn from system						
28194 65	(anhydrous, technical, and aqueous)[5]	16,330	(NA)	15,137	(NA)	16,677	(NA)
28194 66	Produced but not withdrawn from system	(D)	(NA)	(D)	(NA)	(D)	(NA)
28194 11	Boric acid (100% H_3BO_3), (ortho boric acid)	(D)	(D)	(D)	(D)	(D)	(D)
	Other chemicals:						
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3)	159,081	(D)	r139,962	(D)	a237,703	(S)
28196 17	Aluminum chloride, anhydrous (100%)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28196 51	Aluminum sulfate (commercial) (17% aluminum oxide)[6]	a112,504	(NA)	a106,463	(NA)	a89,201	(NA)
28199 12	Calcium carbide (commercial)	17,101	(NA)	16,113	(NA)	21,197	(NA)
28199 19	Calcium phosphates:						
	Monobasic (21% minimum P) (100%)	44,601	25,252	43,924	21,289	(NA)	(NA)
	Dibasic (18.5% minimum P) (100%)[7]	43,671	35,542	44,282	36,103	59,508	36,694
	Tribasic (defluorinated phosphate rock) (18.0% minimum P):						
28742 71	Animal feed, grade (defluorinated phosphate rock) (100%)	22,180	20,960	27,641	22,198	18,641	18,965
28199 22	Other grades (100%)	(D)	(D)	(D)	(D)	(D)	(D)
	Carbon, activated[8]	8,563	9,843	7,350	10,088	7,446	9,155
28199 25	Granular carbons (dry weight)[9]	3,411	5,963	2,935	6,467	2,403	(D)
28199 27	Pulverized carbons (dry weight)	5,153	3,880	4,385	3,621	5,043	(D)
	Chrome colors:						
28163 15	Chrome yellow and orange (c.p.)	1,794	(NA)	2,211	(NA)	a1,209	(NA)
28163 17	Molybdate chrome orange (c.p.)	365	(NA)	564	(NA)	(D)	(NA)
28199 39	Hydrogen peroxide (100% by weight)	10,703	(NA)	11,484	(NA)	13,227	(NA)
28199 58	Phosphorus, elemental, white (yellow) and red (technical)	29,770	13,509	27,850	10,633	29,123	12,522
28199 60	Phosphorus, oxychloride (100%)	2,371	(NA)	2,111	(NA)	2,790	(NA)
28199 61	Phosphorus, pentasulfide (100%)	6,408	(NA)	6,165	(NA)	7,091	(NA)
28199 63	Phosphorus, trichloride (chloride) (100%)	7,933	(NA)	8,126	(NA)	8,106	(NA)
28197 18	Potassium pyrophosphate (tetrapotassium pyrophosphate) (anhydrous, 100%)	1,693	(NA)	1,936	(NA)	1,465	(NA)
28199 69	Silicon tetrachloride (siltet) (100% $SiCl_4$)	(S)	(NA)	(S)	(NA)	(S)	(NA)
28197 21	Sodium metal (100%)	(D)	(D)	(D)	(D)	5,778	4,480
28199 33	Sodium bichromate and chromate (hydrous)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28197 27	Sodium chlorate (100%)	20,256	12,325	21,090	12,777	20,916	10,244
29197 30	Sodium hydrosulfite (100%)	(D)	(NA)	(D)	(NA)	(D)	(NA)
	Sodium phosphates:						
28197 34	Tribasic (100%)	1,527	(NA)	2,609	(NA)	(D)	(NA)
28197 35	Tetrabasic (pyro) (100%)	2,037	(NA)	1,807	(NA)	(D)	(NA)
28197 36	Meta (100%)	2,134	(NA)	3,251	(NA)	3,294	(NA)
28197 38	Tripoly (100%)	46,073	(NA)	51,23[illegible]	(NA)	52,457	(NA)
28197 41	Sodium silicate (soluble silicate glass, liquid and solid) (anhydrous)[10]	54,276	(NA)	71,11[illegible]	(NA)	56,620	(NA)
28197 42	Metasilicate pentahydrate (100%)	3,177	(NA)	3,350	(NA)	a3,759	(NA)
28197 44	Metasilicate anhydrous (100%)	2,951	(NA)	3,443	(NA)	a4,260	(NA)
	Sodium sulfate (100%)	62,061	(NA)	69,265	(NA)	64,051	(NA)
28197 61	High purity	37,808	(NA)	39,495	(NA)	35,269	(NA)
28197 66	Lower purity (99% or less) (includes Glaubers salt)	24,253	(NA)	29,770	(NA)	r28,782	(NA)
28161 00	Titanium dioxide (composite and pure) (commodity weight)[11]	79,848	64,232	73,477	54,821	71,441	54,184

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28A(86)-1, issued April 1986, for a discussion of estimation of missing reports): a20 percent or more of this item is estimated.

(D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. rRevised by 5 percent or more from previously published figures. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1]Production includes amounts liquefied.
[2]Liquid production figures represent total production, including quantities later evaporated to solid caustic.
[3]Source: U.S. Bureau of Mines.
[4]Beginning in July 1985, "Hydrochloric acid from salt and acid" is combined with "Hydrochloric acid, byproduct and other".
[5]Excludes anhydrous used in aqueous.
[6]Excludes quantities produced and consumed in municipalities.
[7]Includes animal feed and other grades, but excludes superphosphate or other fertilizer materials.
[8]Excludes reactivated carbon.
[9]Includes pelleted carbon.
[10]Excludes amounts produced and consumed in making meta, ortho, and sesquisilicates.
[11]Represents total stocks of producing companies, including amounts held at locations other than producing plants.

Table 3. PRODUCTION OF INORGANIC CHEMICALS, BY STATE

(Short tons)

Geographic area	Aluminum sulfate, commercial (17% Al_2O_3)[1]	Sodium silicate (anhydrous)[2]	Hydrochloric acid (100% HCL)	Chlorine gas (100% Cl)[3]	Sodium hydroxide (100% NaOH) total liquid, all processes[4]
JULY 1986					
United States	112,504	54,276	279,600	906,624	943,061
Alabama	(D)	(D)	(D)	53,552	51,937
California	7,473	(D)	[a]7,715	(D)	(D)
Georgia	10,159	5,057	(D)	[a]18,312	(S)
Illinois	(D)	(D)	9,251	-	-
Kentucky	(D)	-	32,523	(D)	(D)
Louisiana	[a]13,419	(D)	(S)	[a]332,528	[a]357,346
Michigan	(D)	-	[a]4,354	-	-
New Jersey	(D)	(D)	(D)	-	-
New York	-	-	(D)	43,998	43,080
Tennessee	(S)	(D)	-	(D)	(D)
Texas	(D)	(D)	[a]99,969	(S)	(S)
Washington	5,416	(D)	(D)	43,498	47,370
West Virginia	(D)	-	7,942	(D)	(D)
All other states	49,025	12,739	24,909	70,405	64,152
JUNE 1986					
United States	106,463	71,119	274,602	896,958	946,138
Alabama	(D)	(D)	(D)	52,654	52,155
California	6,574	(D)	5,973	(D)	(D)
Georgia	10,132	4,763	(D)	[a]17,835	20,513
Illinois	(D)	(D)	12,030	-	-
Kentucky	(D)	-	(D)	(D)	(D)
Louisiana	[a]11,600	8,267	[a]75,517	345,154	378,793
Michigan	(D)	-	3,493	-	-
New Jersey	(D)	(D)	(D)	-	-
New York	-	-	(D)	42,665	39,014
Tennessee	(S)	(D)	-	(D)	(D)
Texas	1,705	(D)	86,051	245,132	259,426
Washington	5,500	(D)	(D)	40,722	46,598
West Virginia	(D)	-	7,399	(D)	(D)
All other states	46,676	21,835	31,733	77,986	69,237

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28A(86)-1, issued April 1986, for a discussion of estimation of missing reports): [a]20 percent or more of this item is estimated.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1] Excludes quantities produced and consumed in municipalities.
[2] Excludes amounts produced and consumed in making meta, ortho, and sesquisilicates.
[3] Production includes amount liquefied.
[4] Includes quantities later evaporated to solid.

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Table 4. PRODUCTION, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF SELECTED INORGANIC CHEMICALS: JUNE 1986

(Short tons)

Product code	Product description	Quantity produced	Exports of domestic merchandise[1]	Imports for consumption[2]	Apparent consumption[3]	Percent imports to apparent consumption
28161 00	Titanium dioxide (composite and pure)	73,477	7,002	19,470	85,945	22.7
	Hydrochloric acid:					
28194 41	From salt and acid	274,602	1,897	9,376	282,081	3.3
28194 45	From chlorine and hydrogen					
28194 47	By-product and other					
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3)	139,962	3,980	235,472	371,454	63.4
28196 51	Aluminum sulfate (commercial)	106,463	116	5,951	111,998	5.3
28197 27	Sodium chlorate	21,090	229	15,605	36,466	42.8
28197 30	Sodium hydrosulfite	(D)	1,068	308	(D)	(D)
	Sodium sulfates (anhydrous 100%):					
28197 61	High purity	69,265	6,943	10,749	73,071	14.7
28197 66	Lower purity (99% or less) (including Glauber's salt)					
28199 12	Calcium carbide (commercial)	16,113	303	1,299	17,109	7.6
28199 58	Phosphorus elemental	27,850	2,367	199	25,682	0.8

Note: This table includes only products relative to this report which are directly comparable for imports, exports, and domestic output (see table 5 in the January 1986 report, M28A(86)-1, issued April 1986).

(D) Data withheld to avoid disclosing figures for individual companies.

[1]Source: Bureau of the Census report EX 546, U.S. Exports.
[2]Source: Bureau of the Census report IM 145-X, U.S. Imports for Consumption and General Imports.
[3]Apparent consumption represents new domestic supply and is derived by subtracting exports from the total of manufactures' production plus imports.

M28A(86)-8

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AUGUST 1986

M28A(86)-8
Issued October 1986

The statistics in this publication are based on a survey of manufacturers and represent total U.S. production and stocks of specified inorganic chemicals. Estimates are included for companies for which reports were not received in time for tabulation. A description of the survey methodology and related information may be found in the January 1986 report for this series, M28A(86)-1, issued April 1986.

This report is available electronically in CENDATA, the Bureau's online information service, through a commercial vendor. The electronic version of this report will be available approximately one week earlier than the printed report. The CENDATA report for September 1986 will be released on or about November 12, 1986. For further information, contact Customer Service, DUSD, Bureau of the Census, Washington, D.C. 20233, or call (301) 763-4100.

Table 1. SUMMARY OF PRODUCTION OF PRINCIPAL INORGANIC CHEMICALS: 1984 to 1986

(Short tons)

Month and year	Chlorine gas (28121 11) (100%)	Sodium hydroxide, total liquid (28123 50) (100%)	Titanium dioxide (28161 00) (commodity wieght)	Hydrochloric acid (28194 41, 45,47) (100%)	Aluminum sulfate (28196 51) (17% Al_2O_3)	Sodium phosphate tripoly (28197 38) (100%)	Phosphorus elemental (28199 58) (100%)	Aluminum oxide (28195 00) (100%)
1986								
August	885,570	915,110	72,800	253,799	114,442	59,265	28,699	(S)
July	906,624	943,061	79,848	279,600	112,504	46,073	29,770	(S)
June	896,958	946,138	73,477	274,602	106,463	51,239	27,850	139,962
May	899,846	939,691	81,843	299,266	97,534	55,887	31,671	222,154
April	873,359	925,649	78,150	261,978	97,079	55,958	31,513	210,138
March	892,862	960,361	72,671	245,594	98,381	54,787	31,045	204,708
February	787,684	873,295	71,429	221,425	85,101	50,668	29,780	192,471
January	828,761	891,767	75,981	225,012	89,484	49,774	33,340	199,145
1985								
Total	10,464,919	10,959,042	814,014	2,776,795	1,003,224	606,915	358,848	2,820,836
December	875,365	907,005	74,722	213,972	77,468	39,932	26,735	184,016
November	779,105	834,995	66,903	202,357	79,179	43,023	28,757	204,273
October	849,359	907,637	67,543	242,724	86,007	52,565	29,810	201,826
September	845,829	898,876	72,443	237,597	82,384	49,644	25,108	228,956
August	843,715	885,453	65,279	216,652	90,029	52,829	29,375	214,538
July	904,624	942,525	71,441	236,881	89,201	52,457	29,123	237,703
June	929,061	934,805	73,370	245,792	86,697	53,143	33,412	232,845
May	926,768	962,824	67,181	245,827	84,662	54,226	32,464	239,412
April	926,223	975,295	68,350	235,086	81,275	52,454	33,537	265,123
March	907,945	954,367	63,030	262,536	89,931	57,236	32,441	284,887
February	828,991	875,243	61,518	225,917	73,941	47,529	26,531	239,713
January	847,934	880,017	62,234	211,971	82,450	51,877	31,555	287,544
1984								
Total	10,699,543	10,914,071	834,889	2,732,323	1,129,476	675,078	386,063	3,954,349
December	884,571	918,798	64,620	215,795	80,390	53,493	35,755	293,211
November	849,154	870,006	76,633	199,710	81,531	58,410	32,875	273,400
October	834,689	882,246	65,587	202,479	88,935	65,499	31,592	309,165
September	906,698	920,625	75,182	225,383	84,790	52,589	32,179	318,711
August	880,467	899,505	64,264	229,560	101,135	60,363	27,191	357,432

Note: Data for 1984 have been revised based on the comparison of figures from monthly report M28A with the 1984 annual report MA28A, Inorganic Chemicals, issued December 1985.

(S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

Address inquiries concerning these figures to U.S. Department of Commerce, Bureau of the Census, Industry Division, Washington, D.C. 20233, or call Debbie Clemens, (301) 763-7807.

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C3.158:

Table 2. PRIMARY PRODUCTION AND STOCKS OF INORGANIC CHEMICALS

(Short tons)

Product code	Product description	August 1986		July 1986		August 1985	
		Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants
	Chlorine and alkalies:						
	Chlorine (100%):						
28121 11	Gas[1]	a885,570	(NA)	a906,624	(NA)	847,836	(NA)
28121 15	Liquid	a697,583	(NA)	a712,852	(NA)	495,483	(NA)
	Sodium hydroxide (caustic soda) (100%) (all processes):						
28123 50	Liquid[2]	a915,110	(NA)	a943,061	(NA)	885,453	(NA)
28123 67	Dry (all forms)	17,062	(NA)	17,102	(NA)	19,293	(NA)
28125 21	Potassium hydroxide (caustic potash) (88 to 92%), liquid[2]	(D)	(NA)	(D)	(NA)	17,120	(NA)
28125 30	Finished sodium bicarbonate (58% Na_2O)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28125 90	Sodium carbonate, natural and synthetic (58%)[3]	765,859	239,778	728,284	334,456	729,255	364,880
	Acids:						
	Hydrochloric (100%)	253,799	(NA)	279,600	(NA)	216,652	(NA)
28194 41	From salt and acid	(4)	(NA)	(4)	(NA)	(4)	(NA)
28194 45	From chlorine and hydrogen	14,845	(NA)	14,895	(NA)	18,473	(NA)
28194 47	Byproduct and other	4 a238,954	(NA)	4 a264,705	(NA)	4 198,179	(NA)
	Hydrofluoric (100%):						
28194 61	Produced and withdrawn from system (anhydrous, technical, and aqueous)[5]	14,188	(NA)	16,330	(NA)	11,393	(NA)
28194 65	Produced but not withdrawn from system	(D)	(NA)	(D)	(NA)	(D)	(NA)
28194 66	Boric acid (100% H_3BO_3), (ortho boric acid)	(D)	(D)	(D)	(D)	(D)	(D)
	Other chemicals:						
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3)	(S)	(D)	(S)	(D)	a214,538	a126,280
28196 17	Aluminum chloride, anhydrous (100%)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28196 51	Aluminum sulfate (commercial) (17% aluminum oxide)[6]	a114,442	(NA)	a112,504	(NA)	a90,029	(NA)
28199 12	Calcium carbide (commercial)	13,063	(NA)	17,101	(NA)	17,559	(NA)
28199 19	Calcium phosphates:						
	Monobasic (21% minimum P) (100%)	29,418	23,318	44,601	25,252	(NA)	(NA)
	Dibasic (18.5% minimum P) (100%)[7]	39,760	34,339	43,671	35,542	62,339	50,147
	Tribasic (defluorinated phosphate rock) (18.0% minimum P):						
28742 71	Animal feed, grade (defluorinated phosphate rock) (100%)	21,846	17,079	22,180	20,960	19,423	20,225
28199 22	Other grades (100%)	(D)	(D)	(D)	(D)	(D)	(D)
	Carbon, activated[8]	7,393	10,218	8,563	9,843	6,050	8,831
28199 25	Granular carbons (dry weight)[9]	(D)	6,647	3,411	5,963	1,809	(D)
28199 27	Pulverized carbons (dry weight)	(D)	3,571	5,153	3,880	4,139	(D)
	Chrome colors:						
28163 15	Chrome yellow and orange (c.p.)	1,898	(NA)	1,794	(NA)	1,628	(NA)
28163 17	Molybdate chrome orange (c.p.)	472	(NA)	365	(NA)	421	(NA)
28199 39	Hydrogen peroxide (100% by weight)	13,308	(NA)	r11,703	(NA)	13,864	(NA)
28199 58	Phosphorus, elemental, white (yellow) and red (technical)	28,699	13,424	29,770	13,509	29,375	11,630
28199 60	Phosphorus, oxychloride (100%)	2,597	(NA)	2,436	(NA)	1,624	(NA)
28199 61	Phosphorus, pentasulfide (100%)	a5,227	(NA)	a6,514	(NA)	6,766	(NA)
28199 63	Phosphorus, trichloride (chloride) (100%)	a9,003	(NA)	a7,838	(NA)	7,366	(NA)
28197 18	Potassium pyrophosphate (tetrapotassium pyrophosphate) (anhydrous, 100%)	1,669	(NA)	1,693	(NA)	1,812	(NA)
28199 69	Silicon tetrachloride (siltet) (100% $SiCl_4$)	(S)	(NA)	(S)	(NA)	(S)	(NA)
28197 21	Sodium metal (100%)	(D)	(D)	(D)	(D)	4,814	4,312
28199 33	Sodium bichromate and chromate (hydrous)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28197 27	Sodium chlorate (100%)	20,992	a13,155	20,256	a12,325	21,829	11,336
29197 30	Sodium hydrosulfite (100%)	(D)	(NA)	(D)	(NA)	(D)	(NA)
	Sodium phosphates:						
28197 34	Tribasic (100%)	2,748	(NA)	1,527	(NA)	3,340	(NA)
28197 35	Tetrabasic (pyro) (100%)	2,558	(NA)	2,037	(NA)	2,702	(NA)
28197 36	Meta (100%)	2,689	(NA)	2,134	(NA)	3,209	(NA)
28197 38	Tripoly (100%)	59,265	(NA)	46,073	(NA)	52,829	(NA)
28197 41	Sodium silicate (soluble silicate glass, liquid and solid) (anhydrous)[10]	55,709	(NA)	54,276	(NA)	51,576	(NA)
28197 42	Metasilicate pentahydrate (100%)	3,698	(NA)	3,177	(NA)	3,668	(NA)
28197 44	Metasilicate anhydrous (100%)	3,358	(NA)	2,951	(NA)	4,616	(NA)
	Sodium sulfate (100%)	61,250	(NA)	62,061	(NA)	63,288	(NA)
28197 61	High purity	35,866	(NA)	38,680	(NA)	34,496	(NA)
28197 66	Lower purity (99% or less) (includes Glaubers salt)	25,384	(NA)	24,253	(NA)	r28,792	(NA)
28161 00	Titanium dioxide (composite and pure) (commodity weight)[11]	72,800	60,049	79,843	64,232	65,279	51,578

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28A(86)-1, issued April 1986, for a discussion of estimation of missing reports): a20 percent or more of this item is estimated.

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[1]Production includes amounts liquefied.
[2]Liquid production figures represent total production, including quantities later evaporated to solid caustic.
[3]Source: U.S. Bureau of Mines.
[4]Beginning in July 1985, "Hydrochloric acid from salt and acid" is combined with "Hydrochloric acid, byproduct and other".
[5]Excludes anhydrous used in aqueous.
[6]Excludes quantities produced and consumed in municipalities.
[7]Includes animal feed and other grades, but excludes superphosphate or other fertilizer materials.
[8]Excludes reactivated carbon.
[9]Includes pelleted carbon.
[10]Excludes amounts produced and consumed in making meta, ortho, and sesquisilicates.
[11]Represents total stocks of producing companies, including amounts held at locations other than producing plants.

Table 3. PRODUCTION OF INORGANIC CHEMICALS, BY STATE

(Short tons)

Geographic area	Aluminum sulfate, commercial (17% Al_2O_3)[1]	Sodium silicate (anhydrous)[2]	Hydrochloric acid (100% HCL)	Chlorine gas (100% Cl)[3]	Sodium hydroxide (100% NaOH) total liquid, all processes[4]
AUGUST 1986					
United States	114,442	55,709	253,799	885,570	915,110
Alabama	(D)	(D)	(D)	54,321	53,195
California	7,633	(D)	(S)	(D)	(D)
Georgia	11,271	4,699	(D)	[a]18,435	(S)
Illinois	(D)	(D)	8,147	-	-
Kentucky	(D)	-	(D)	(D)	(D)
Louisiana	[a]14,368	(D)	(S)	[a]319,736	[a]356,942
Michigan	(D)	-	[a]4,197	-	-
New Jersey	(D)	(D)	7,015	-	-
New York	-	-	(D)	40,913	39,581
Tennessee	(S)	(D)	-	(D)	(D)
Texas	(D)	(D)	80,771	(S)	[a]246,687
Washington	5,465	(D)	(D)	41,451	46,439
West Virginia	(D)	-	(D)	(D)	(D)
All other states	50,215	15,509	29,405	79,017	71,006
JULY 1986					
United States	112,504	54,276	279,600	906,624	943,061
Alabama	(D)	(D)	(D)	53,552	51,937
California	7,473	(D)	[a]7,715	(D)	(D)
Georgia	10,159	5,057	(D)	[a]18,312	(S)
Illinois	(D)	(D)	9,251	-	-
Kentucky	(D)	-	32,523	(D)	(D)
Louisiana	[a]13,419	(D)	(S)	[a]332,528	[a]357,346
Michigan	(D)	-	[a]4,354	-	-
New Jersey	(D)	(D)	(D)	-	-
New York	-	-	(D)	43,998	43,080
Tennessee	(S)	(D)	-	(D)	(D)
Texas	(D)	(D)	[a]99,969	(S)	(S)
Washington	5,416	(D)	(D)	43,498	47,370
West Virginia	(D)	-	7,942	(D)	(D)
All other states	49,025	12,739	24,909	73,405	64,152

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28A(86)-1, issued April 1986, for a discussion of estimation of missing reports): [a]20 percent or more of this item is estimated.

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Table 4. PRODUCTION, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF SELECTED INORGANIC CHEMICALS: JULY 1986

(Short tons)

Product code	Product description	Quantity produced	Exports of domestic merchandise[1]	Imports for consumption[2]	Apparent consumption[3]	Percent imports to apparent consumption
28161 00	Titanium dioxide (composite and pure).....	79,848	6,950	18,271	91,169	20.0
	Hydrochloric acid:					
28194 41	From salt and acid.....					
28194 43	From chlorine and hydrogen.....	279,600	1,167	13,942	292,375	4.8
28194 47	By-product and other.....					
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3).....	(S)	73,508	404,627	(S)	(S)
28196 51	Aluminum sulfate (commercial).....	112,504	165	6,046	118,385	5.1
28197 27	Sodium chlorate.....	20,256	8	21,394	41,642	51.4
28197 30	Sodium hydrosulfite.....	(D)	1,218	531	(D)	(D)
	Sodium sulfates (anhydrous 100%):					
28197 61	High purity.....					
28197 66	Lower purity (99% or less) (including Glauber's salt).....	62,061	5,237	10,834	67,658	16.0
28199 12	Calcium carbide (commercial).....	17,101	392	1,533	18,242	8.4
28199 58	Phosphorus elemental.....	29,770	2,092	236	27,914	0.8

Note: This table includes only products relative to this report which are directly comparable for imports, exports, and domestic output (see table 5 in the January 1986 report, M28A(86)-1, issued April 1986).

(D) Data withheld to avoid disclosing figures for individual companies. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1]Source: Bureau of the Census report EX 546, U.S. Exports.
[2]Source: Bureau of the Census report IM 145-X, U.S. Imports for Consumption and General Imports.
[3]Apparent consumption represents new domestic supply and is derived by subtracting exports from the total of manufactures' production plus imports.

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SEPTEMBER 1986

M28A(86)-9
Issued December 1986

The statistics in this publication are based on a survey of manufacturers and represent total U.S. production and stocks of specified inorganic chemicals. Estimates are included for companies for which reports were not received in time for tabulation. A description of the survey methodology and related information may be found in the January 1986 report for this series, M28A(86)-1, issued April 1986.

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Table 1. SUMMARY OF PRODUCTION OF PRINCIPAL INORGANIC CHEMICALS: 1984 to 1986

(Short tons)

Month and year	Chlorine gas (28121 11) (100%)	Sodium hydroxide, total liquid (28123 50) (100%)	Titanium dioxide (28161 00) (commodity wieght)	Hydrochloric acid (28194 41, 45,47) (100%)	Aluminum sulfate (28196 51) (17% Al_2O_3)	Sodium phosphate tripoly (28197 38) (100%)	Phosphorus elemental (28199 58) (100%)	Aluminum oxide (28195 00) (100%)
1986								
September	877,271	947,693	78,665	233,571	110,403	47,470	28,244	300,867
August	885,980	932,816	72,800	238,198	123,521	61,418	28,699	304,514
July	906,624	943,061	79,848	279,600	119,243	48,200	29,770	231,380
June	896,958	946,138	73,477	274,602	113,125	53,392	27,850	302,918
May	899,846	939,691	81,843	299,266	104,040	58,088	31,671	314,894
April	873,359	925,649	78,150	261,978	103,353	58,085	31,513	323,786
March	892,862	960,361	72,671	245,594	105,276	57,112	31,045	334,414
February	787,684	873,295	71,429	221,425	90,910	52,643	29,780	298,448
January	828,761	891,767	75,981	225,012	95,837	51,877	33,340	329,359
1985								
Total	10,402,060	10,810,509	860,443	2,807,018	[1] 1,268,087	625,399	359,196	3,500,977
December	870,127	896,294	78,591	216,741	99,127	41,181	27,509	240,699
November	773,867	824,284	70,772	205,128	100,992	44,590	29,092	260,951
October	844,121	896,926	71,412	245,493	108,209	54,132	29,919	258,504
September	840,591	868,164	76,312	240,366	104,354	51,211	26,228	285,634
August	838,477	874,742	69,148	219,421	112,539	54,396	28,863	271,216
July	899,386	931,814	75,310	239,650	111,634	54,024	29,379	294,381
June	923,820	924,094	77,239	248,561	108,976	54,710	32,746	289,523
May	921,530	952,112	71,050	248,596	106,785	55,791	32,002	296,090
April	920,985	964,583	72,219	237,855	103,166	54,021	32,844	321,801
March	902,707	943,656	66,899	265,303	112,443	58,803	31,984	341,565
February	823,753	864,533	65,387	228,686	95,442	49,096	27,344	296,391
January	842,696	869,307	66,103	211,218	104,420	53,444	31,286	344,227
1984								
Total	10,699,543	10,914,071	834,889	2,692,567	1,239,032	692,262	386,063	3,954,349
December	884,571	918,798	64,620	212,482	89,519	54,925	35,755	293,211
November	849,154	870,006	76,633	196,397	90,661	59,842	32,875	273,400
October	834,689	882,246	65,587	199,166	98,064	66,931	31,592	309,165
September	906,698	920,625	75,182	222,070	93,919	54,021	32,179	318,711

Note: Data for 1985 have been revised based on the comparison of figures from monthly report M28A with the 1985 annual report MA28A, Inorganic Chemicals, issued October 1986.

[1] The 1985 aluminum sulfate production figure has been revised due to new information from several companies.

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C 3.158:

Table 2. PRIMARY PRODUCTION AND STOCKS OF INORGANIC CHEMICALS

(Short tons)

Product code	Product description	September 1986		August 1986		September 1985	
		Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants
	Chlorine and alkalies:						
	Chlorine (100%):						
28121 11	Gas[1]	877,271	(NA)	885,980	(NA)	840,591	(NA)
28121 15	Liquid	693,178	(NA)	699,999	(NA)	638,358	(NA)
	Sodium hydroxide (caustic soda) (100%) (all processes):						
28123 50	Liquid[2]	947,693	(NA)	932,816	(NA)	868,164	(NA)
28123 67	Dry (all forms)	a18,641	(NA)	r19,071	(NA)	23,295	(NA)
28125 21	Potassium hydroxide (caustic potash) (88 to 92%), liquid[2]	(D)	(NA)	(D)	(NA)	18,982	(NA)
28125 30	Finished sodium bicarbonate (58% Na_2O)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28125 90							
14745 11	Sodium carbonate, natural (58%)[3]	733,566	292,531	765,859	239,778	671,574	339,552
	Acids:						
	Hydrochloric (100%)	233,571	(NA)	238,198	(NA)	240,366	(NA)
28194 41	From salt and acid	(4)	(NA)	(4)	(NA)	(4)	(NA)
28194 45	From chlorine and hydrogen	16,358	(NA)	14,845	(NA)	17,582	(NA)
28194 47	Byproduct and other	a217,213	(NA)	r223,353	(NA)	a222,784	(NA)
	Hydrofluoric (100%):						
28194 61	Produced and withdrawn from system (anhydrous, technical, and aqueous)[5]	16,443	(NA)	r21,899	(NA)	19,466	(NA)
28194 65							
28194 66	Produced but not withdrawn from system	(D)	(NA)	(D)	(NA)	(D)	(NA)
28194 11	Boric acid (100% H_3BO_3), (ortho boric acid)	(D)	(D)	(D)	(D)	(D)	(D)
	Other chemicals:						
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3)	a300,867	(D)	a304,514	(D)	285,634	a139,628
28196 17	Aluminum chloride, anhydrous (100%)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28196 51	Aluminum sulfate (commercial) (17% aluminum oxide)[6]	a110,403	(NA)	a123,521	(NA)	98,001	(NA)
28199 12	Calcium carbide (commercial)	18,202	(NA)	r15,604	(NA)	18,376	(NA)
28199 19	Calcium phosphates:						
	Monobasic (21% minimum P) (100%)	39,508	17,373	29,418	23,318	(NA)	(NA)
	Dibasic (18.5% minimum P) (100%)[7]	49,535	29,759	r44,045	34,339	41,713	49,342
	Tribasic (defluorinated phosphate rock) (18.0% minimum P):						
28742 71	Animal feed, grade (defluorinated phosphate rock) (100%)	36,318	19,967	r31,440	18,995	19,115	17,487
28199 22	Other grades (100%)	1,767	(D)	1,344	(D)	(D)	(D)
	Carbon, activated[8]	8,590	9,800	7,670	10,218	9,643	12,531
28199 25	Granular carbons (dry weight)[9]	4,472	6,888	r4,115	6,647	4,992	9,162
28199 27	Pulverized carbons (dry weight)	4,118	2912	r3,555	3,571	4,650	3,369
	Chrome colors:						
28163 15	Chrome yellow and orange (c.p.)	1,603	(NA)	r1,779	(NA)	1,623	(NA)
28163 17	Molybdate chrome orange (c.p.)	507	(NA)	r537	(NA)	501	(NA)
28199 39	Hydrogen peroxide (100% by weight)	13,304	(NA)	13,308	(NA)	12,961	(NA)
28199 58	Phosphorus, elemental, white (yellow) and red (technical)	28,244	13,248	28,699	13,424	26,228	10,200
28199 60	Phosphorus, oxychloride (100%)	2,741	(NA)	r2,456	(NA)	1,989	(NA)
28199 61	Phosphorus, pentasulfide (100%)	3,471	(NA)	a5,262	(NA)	5,514	(NA)
28199 63	Phosphorus, trichloride (chloride) (100%)	9,120	(NA)	a9,311	(NA)	6,218	(NA)
28197 18	Potassium pyrophosphate (tetrapotassium pyrophosphate) (anhydrous, 100%)	1,848	(NA)	1,669	(NA)	1,634	(NA)
28199 69	Silicon tetrachloride (silicon) (100% $SiCl_4$)	a2,728	(NA)	(D)	(NA)	2,390	(NA)
28197 21	Sodium metal (100%)	4,990	(D)	4,957	(D)	5,236	3,962
28199 33	Sodium bichromate and chromate (hydrous)	(D)	(NA)	(D)	(NA)	9,156	(NA)
28197 27	Sodium chlorate (100%)	26,498	a12,585	r26,903	a13,155	24,495	9,775
29197 30	Sodium hydrosulfite (100%)	(D)	(NA)	(D)	(NA)	(D)	(NA)
	Sodium phosphates:						
28197 34	Tribasic (100%)	2,218	(NA)	2,858	(NA)	1,967	(NA)
28197 35	Tetrabasic (pyro) (100%)	2,055	(NA)	2,640	(NA)	3,550	(NA)
28197 36	Meta (100%)	3,498	(NA)	2,689	(NA)	3,246	(NA)
28197 38	Tripoly (100%)	47,470	(NA)	61,618	(NA)	51,211	(NA)
28197 41	Sodium silicate (soluble silicate glass, liquid and solid) (anhydrous)[10]	a71,858	(NA)	r61,664	(NA)	57,300	(NA)
28197 42	Metasilicate pentahydrate (100%)	3,419	(NA)	r4,157	(NA)	5,450	(NA)
28197 44	Metasilicate anhydrous (100%)	5,190	(NA)	r3,683	(NA)	6,095	(NA)
	Sodium sulfate (100%)	57,474	(NA)	60,727	(NA)	68,806	(NA)
28197 61	High purity	40,044	(NA)	36,172	(NA)	39,190	(NA)
28197 66	Lower purity (99% or less) (includes Glaubers salt)	17,430	(NA)	24,555	(NA)	29,616	(NA)
28161 00	Titanium dioxide (composite and pure) (commodity weight)[11]	78,665	64,753	72,800	59,708	76,312	52,277

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28A(86)-1, issued April 1986, for a discussion of estimation of missing reports): a20 percent or more of this item is estimated.

(D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. rRevised by 5 percent or more from previously published figures.

[1]Production includes amounts liquefied.
[2]Liquid production figures represent total production, including quantities later evaporated to solid caustic.
[3]Source: U.S. Bureau of Mines.
[4]Beginning in July 1985, "Hydrochloric acid from salt and acid" is combined with "Hydrochloric acid, byproduct and other".
[5]Excludes anhydrous used in aqueous.
[6]Excludes quantities produced and consumed in municipalities.
[7]Includes animal feed and other grades, but excludes superphosphate or other fertilizer materials.
[8]Excludes reactivated carbon.
[9]Includes pelleted carbon.
[10]Excludes amounts produced and consumed in making meta, ortho, and sesquisilicates.
[11]Represents total stocks of producing companies, including amounts held at locations other than producing plants.

Table 3. PRODUCTION OF INORGANIC CHEMICALS, BY STATE

(Short tons)

Geographic area	Aluminum sulfate, commercial (17% Al_2O_3)[1]	Sodium silicate (anhydrous)[2]	Hydrochloric acid (100% HCL)	Chlorine gas (100% Cl)[3]	Sodium hydroxide (100% NaOH), total liquid, all processes[4]
SEPTEMBER 1986					
United States	110,403	71,858	233,571	877,271	947,693
Alabama	(D)	(D)	(D)	[a]53,461	54,549
California	6,950	(D)	7,734	(D)	(D)
Georgia	9,245	[a]9,632	(D)	18,249	21,422
Illinois	(D)	(D)	8,948	-	(D)
Kentucky	(D)	-	(D)	(D)	(D)
Louisiana	11,336	(D)	[a]50,363	[a]342,771	373,673
Michigan	(D)	-	4,468	-	(D)
New Jersey	(D)	(D)	8,177	-	-
New York	-	(D)	(D)	45,474	46,166
Tennessee	6,337	(D)	-	(D)	(D)
Texas	3,478	(D)	80,274	(D)	(D)
Washington	(D)	(D)	1,158	42,168	46,010
West Virginia	5,801	-	3,149	(D)	45,747
All other states	51,968	20,871	28,816	79,749	69,017
AUGUST 1986					
United States	123,521	61,664	238,198	885,980	932,816
Alabama	(D)	(D)	(D)	54,321	55,605
California	8,267	(D)	7,340	(D)	(D)
Georgia	11,152	8,567	(D)	18,600	21,900
Illinois	(D)	(D)	8,347	-	(D)
Kentucky	(D)	-	(D)	(D)	(D)
Louisiana	12,897	(D)	[a]49,187	323,331	357,546
Michigan	(D)	-	4,390	-	(D)
New Jersey	(D)	(D)	7,955	-	-
New York	-	(D)	(D)	40,913	39,595
Tennessee	6,762	(D)	-	(D)	(D)
Texas	5,686	(D)	81,165	250,827	(D)
Washington	5,465	(D)	919	41,451	46,439
West Virginia	(D)	-	(D)	(D)	45,937
All other states	57,305	17,187	30,502	80,523	69,447

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28A(86)-1, issued April 1986, for a discussion of estimation of missing reports): [a]20 percent or more of this item is estimated.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies.

[1] Excludes quantities produced and consumed in municipalities.
[2] Excludes amounts produced and consumed in making meta, ortho, and sesquisilicates.
[3] Production includes amount liquefied.
[4] Includes quantities later evaporated to solid.

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Table 4. PRODUCTION, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF SELECTED INORGANIC CHEMICALS: AUGUST 1986

(Short tons)

Product code	Product description	Quantity produced	Exports of domestic merchandise[1]	Imports for consumption[2]	Apparent consumption[3]	Percent imports to apparent consumption
28161 00	Titanium dioxide (composite and pure).....	72,800	9,740	17,611	80,671	21.8
	Hydrochloric acid:					
28194 41	From salt and acid.....	238,198	853	7,693	245,038	3.1
28194 45	From chlorine and hydrogen.....					
28194 47	By-product and other.....					
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3).....	304,514	25,404	289,634	568,744	50.9
28196 51	Aluminum sulfate (commercial).....	123,521	163	6,815	130,173	5.2
28197 27	Sodium chlorate.....	26,903	386	19,215	175,905	10.9
28197 30	Sodium hydrosulfite.....	(D)	1,228	280	(D)	(D)
	Sodium sulfates (anhydrous 100%):					
28197 61	High purity.....	60,727	12,497	12,921	61,151	21.1
28197 66	Lower purity (99% or less) (including Glauber's salt).....					
28199 12	Calcium carbide (commercial).....	15,604	70	1,668	17,202	9.7
28199 58	Phosphorus elemental.....	28,699	1,840	108	26,967	0.4

Note: This table includes only products relative to this report which are directly comparable for imports, exports, and domestic output (see table 5 in the January 1986 report, M28A(86)-1, issued April 1986).

(D) Data withheld to avoid disclosing figures for individual companies.

[1]Source: Bureau of the Census report EX 546, U.S. Exports.
[2]Source: Bureau of the Census report IM 145-X, U.S. Imports for Consumption and General Imports.
[3]Apparent consumption represents new domestic supply and is derived by subtracting exports from the total of manufactures' production plus imports.

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OCTOBER 1986

M28A(86)-10
Issued December 1986

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1986								
October	838,785	888,642	75,981	217,802	110,604	51,252	31,629	(S)
September	877,271	917,809	78,665	233,571	110,403	47,470	28,244	(S)
August	885,980	932,816	72,800	238,198	123,521	61,418	28,699	304,514
July	906,624	943,061	79,848	279,600	119,243	48,200	29,770	231,380
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September	840,591	868,164	76,312	240,366	104,354	51,211	26,228	285,634
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January	842,696	869,307	66,103	211,218	104,420	53,444	31,286	344,222
1984								
Total	10,699,543	10,914,071	834,889	2,692,567	1,239,032	692,262	386,063	3,954,349
December	884,571	918,798	64,620	212,482	89,519	54,925	35,755	293,211
November	849,154	870,006	76,633	196,397	90,661	59,842	32,875	273,400
October	834,689	882,246	65,587	199,166	98,064	66,931	31,592	309,165

Note: Data for 1985 have been revised based on the comparison of figures from monthly report M28A with the 1985 annual report MA28A, Inorganic Chemicals, issued October 1986.

(S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1] The 1985 aluminum sulfate production figure has been revised due to new information from several companies.

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(Short tons)

Product code	Product description	October 1986		September 1986		October 1985	
		Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants
	Chlorine and alkalies:						
	Chlorine (100%):						
28121 11	Gas[1]	a838,785	(NA)	a877,271	(NA)	a849,359	(NA)
28121 15	Liquid	a657,716	(NA)	a693,178	(NA)	487,526	(NA)
	Sodium hydroxide (caustic soda) (100%) (all processes):						
28123 50	Liquid[2]	a888,642	(NA)	a917,809	(NA)	a907,637	(NA)
28123 67	Dry (all forms)	21,294	(NA)	18,641	(NA)	18,543	(NA)
28125 21	Potassium hydroxide (caustic potash) (88 to 92%), liquid[2]	(D)	(NA)	(D)	(NA)	18,202	(NA)
28125 30	Finished sodium bicarbonate (58% Na_2O)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28125 90 14745 11	Sodium carbonate, natural (58%)[3]	700,233	294,000	733,566	292,531	793,386	338,696
	Acids:						
	Hydrochloric (100%)	a217,802	(NA)	233,571	(NA)	a242,724	(NA)
28194 41	From salt and acid	(4)	(NA)	(4)	(NA)	(4)	(NA)
28194 45	From chlorine and hydrogen	19,738	(NA)	16,358	(NA)	20,884	(NA)
28194 47	Byproduct and other	4 a198,064	(NA)	4 a217,213	(NA)	4 a221,840	(NA)
	Hydrofluoric (100%):						
28194 61	Produced and withdrawn from system						
28194 65	(anhydrous, technical, and aqueous)[5]	13,493	(NA)	r11,020	(NA)	11,598	(NA)
28194 66	Produced but not withdrawn from system	(D)	(NA)	(D)	(NA)	(D)	(NA)
28194 11	Boric acid (100% H_3BO_3), (ortho boric acid)	(D)	(D)	(D)	(D)	(D)	(D)
	Other chemicals:						
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3)	(S)	(D)	(S)	(D)	201,826	a138,415
28196 17	Aluminum chloride, anhydrous (100%)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28196 51	Aluminum sulfate (commercial) (17% aluminum oxide)[6]	a110,604	(NA)	a110,403	(NA)	a86,007	(NA)
28199 12	Calcium carbide (commercial)	18,771	(NA)	r16,444	(NA)	17,673	(NA)
28199 19	Calcium phosphates:						
	Monobasic (21% minimum P) (100%)	41,832	13,490	41,032	17,373	(NA)	(NA)
	Dibasic (18.5% minimum P) (100%)[7]	54,418	30,919	49,535	29,759	60,760	45,157
	Tribasic (defluorinated phosphate rock) (18.0% minimum P):						
28742 71	Animal feed, grade (defluorinated phosphate rock) (100%)	40,932	19,948	36,318	19,967	19,764	(D)
28199 22	Other grades (100%)	2,063	(D)	1,767	(D)	(D)	(D)
	Carbon, activated[8]	8,655	8,169	8,590	9,800	9,125	12,391
28199 25	Granular carbons (dry weight)[9]	a4,091	5,549	4,472	6,888	4,446	8,617
28199 27	Pulverized carbons (dry weight)	4,564	2,620	4,118	2,912	4,679	3,774
	Chrome colors:						
28163 15	Chrome yellow and orange (c.p.)	1,554	(NA)	1,603	(NA)	1,413	(NA)
28163 17	Molybdate chrome orange (c.p.)	606	(NA)	r438	(NA)	521	(NA)
28199 39	Hydrogen peroxide (100% by weight)	12,715	(NA)	13,635	(NA)	10,800	(NA)
28199 58	Phosphorus, elemental, white (yellow) and red (technical)	31,629	15,905	28,244	13,248	29,810	(D)
28199 60	Phosphorus, oxychloride (100%)	3,293	(NA)	a2,810	(NA)	1,709	(NA)
28199 61	Phosphorus, pentasulfide (100%)	a5,414	(NA)	a3,471	(NA)	5,571	(NA)
28199 63	Phosphorus, trichloride (chloride) (100%)	7,977	(NA)	9,120	(NA)	5,162	(NA)
28197 18	Potassium pyrophosphate (tetrapotassium pyrophosphate) (anhydrous, 100%)	1,288	(NA)	1,848	(NA)	1,158	(NA)
28199 69	Silicon tetrachloride (silfet) (100% $SiCl_4$)	(S)	(NA)	a2,728	(NA)	(S)	(NA)
28197 21	Sodium metal (100%)	5,111	(D)	4,990	(D)	(D)	3,705
28199 33	Sodium bichromate and chromate (hydrous)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28197 27	Sodium chlorate (100%)	25,448	a11,361	r24,555	a12,585	23,883	9,160
29197 30	Sodium hydrosulfite (100%)	(D)	(NA)	(D)	(NA)	(D)	(NA)
	Sodium phosphates:						
28197 34	Tribasic (100%)	2,525	(NA)	2,218	(NA)	4,650	(NA)
28197 35	Tetrabasic (pyro) (100%)	2,856	(NA)	2,055	(NA)	2,036	(NA)
28197 36	Meta (100%)	3,078	(NA)	3,498	(NA)	3,591	(NA)
28197 38	Tripoly (100%)	51,252	(NA)	47,470	(NA)	52,565	(NA)
28197 41	Sodium silicate (soluble silicate glass, liquid and solid) (anhydrous)[10]	68,303	(NA)	69,511	(NA)	86,421	(NA)
28197 42	Metasilicate pentahydrate (100%)	5,142	(NA)	r3,979	(NA)	4,480	(NA)
28197 44	Metasilicate anhydrous (100%)	4,774	(NA)	5,046	(NA)	5,711	(NA)
	Sodium sulfate (100%)	67,412	(NA)	r61,505	(NA)	131,763	(NA)
28197 61	High purity	a41,859	(NA)	40,044	(NA)	37,001	(NA)
28197 66	Lower purity (99% or less) (includes Glaubers salt)	25,553	(NA)	r21,461	(NA)	30,001	(NA)
28161 00	Titanium dioxide (composite and pure) (commodity weight)[11]	75,981	64,462	78,665	64,753	67,543	(D)

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28A(86)-1, issued April 1986, for a discussion of estimation of missing reports): a20 percent or more of this item is estimated.

(D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. rRevised by 5 percent or more from previously published figures. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1]Production includes amounts liquefied.
[2]Liquid production figures represent total production, including quantities later evaporated to solid caustic.
[3]Source: U.S. Bureau of Mines.
[4]Beginning in July 1985, "Hydrochloric acid from salt and acid" is combined with "Hydrochloric acid, byproduct and other".
[5]Excludes anhydrous used in aqueous.
[6]Excludes quantities produced and consumed in municipalities.
[7]Includes animal feed and other grades, but excludes superphosphate or other fertilizer materials.
[8]Excludes reactivated carbon.
[9]Includes pelleted carbon.
[10]Excludes amounts produced and consumed in making meta, ortho, and sesquisilicates.
[11]Represents total stocks of producing companies, including amounts held at locations other than producing plants.

Table 3. PRODUCTION OF INORGANIC CHEMICALS, BY STATE

(Short tons)

Geographic area	Aluminum sulfate, commercial - ($17\%-Al_2O_3$)[1]	Sodium silicate (anhydrous)[2]	Hydrochloric acid (100% HCL)	Chlorine gas (100% Cl)[3]	Sodium hydroxide (100% NaOH) total liquid, all processes[4]
OCTOBER 1986					
United States	[a]110,604	68,303	[a]217,802	[a]838,785	[a]888,642
Alabama	(D)	(D)	(D)	53,556	51,708
California	5,744	(D)	[a]7,603	(D)	(D)
Georgia	11,359	9,392	(D)	[a]16,734	(D)
Illinois	(D)	(D)	8,425	(D)	(D)
Kentucky	(D)	-	(D)	(D)	(D)
Louisiana	9,758	(D)	(S)	[a]322,588	[a]355,019
Michigan	(D)	-	[a]2,740	-	(D)
New Jersey	(D)	(D)	6,281	-	-
New York	-	-	(D)	44,775	43,512
Tennessee	(S)	(D)	-	(D)	(D)
Texas	1,915	(D)	(S)	(D)	(D)
Washington	5,835	(D)	1,661	43,252	49,050
West Virginia	(D)	-	5,478	(D)	(D)
All other states	52,909	14,523	34,000	80,176	69,546
SEPTEMBER 1986					
United States	[a]110,403	69,511	[a]233,571	[a]877,271	[a]917,809
Alabama	(D)	(D)	(D)	53,461	51,405
California	6,950	(D)	7,734	(D)	(D)
Georgia	9,245	7,496	(D)	18,249	(D)
Illinois	(D)	(D)	8,948	-	(D)
Kentucky	(D)	-	(D)	(D)	(D)
Louisiana	11,336	(D)	[a]50,363	[a]342,771	[a]372,098
Michigan	(D)	-	4,468	-	(D)
New Jersey	(D)	(D)	8,177	-	-
New York	-	-	(D)	45,474	46,136
Tennessee	6,337	(D)	-	(D)	(D)
Texas	3,478	(D)	80,274	(D)	(D)
Washington	5,812	-	1,158	42,168	46,010
West Virginia	(D)	-	3,149	(D)	(D)
All other states	51,968	15,153	28,816	79,749	68,818

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28A(86)-1, issued April 1986, for a discussion of estimation of missing reports): [a]20 percent or more of this item is estimated.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1] Excludes quantities produced and consumed in municipalities.
[2] Excludes amounts produced and consumed in making meta, ortho, and sesquisilicates.
[3] Production includes amount liquefied.
[4] Includes quantities later evaporated to solid.

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Table 4. PRODUCTION, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF SELECTED INORGANIC CHEMICALS: SEPTEMBER 1986

(Short tons)

Product code	Product description	Quantity produced	Exports of domestic merchandise[1]	Imports for consumption[2]	Apparent consumption[3]	Percent imports to apparent consumption
28161 00	Titanium dioxide (composite and pure)	78,665	10,217	14,920	83,368	17.9
	Hydrochloric acid:					
28194 41	From salt and acid	233,571	3,122	3,669	234,118	1.6
28194 45	From chlorine and hydrogen					
28194 47	By-product and other					
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3)	(S)	16,249	198,575	(S)	(S)
28196 51	Aluminum sulfate (commercial)	110,403	243	2,375	112,535	2.1
28197 27	Sodium chlorate	24,555	16	17,393	41,932	41.5
28197 30	Sodium hydrosulfite	(D)	1,886	343	(D)	(D)
	Sodium sulfates (anhydrous 100%):					
28197 61	High purity	61,505	273	11,077	72,309	15.3
28197 66	Lower purity (99% or less) (including Glauber's salt)					
28199 12	Calcium carbide (commercial)	16,444	105	1,276	17,615	7.2
28199 58	Phosphorus elemental	28,244	1,919	64	26,389	0.2

Note: This table includes only products relative to this report which are directly comparable for imports, exports, and domestic output (see table 5 in the January 1986 report, M28A(86)-1, issued April 1986).

(D) Data withheld to avoid disclosing figures for individual companies. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1]Source: Bureau of the Census report EX 546, U.S. Exports.
[2]Source: Bureau of the Census report IM 145-X, U.S. Imports for Consumption and General Imports.
[3]Apparent consumption represents new domestic supply and is derived by subtracting exports from the total of manufactures' production plus imports.

M28A(86)-11

CURRENT INDUSTRIAL REPORTS

Inorganic Chemicals

U.S. Department of Commerce
BUREAU OF THE CENSUS

NOVEMBER 1986
M28A(86)-11
Issued January 1987

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The statistics in this publication are based on a survey of manufacturers and represent total U.S. production and stocks of specified inorganic chemicals. Estimates are included for companies for which reports were not received in time for tabulation. A description of the survey methodology and related information may be found in the January 1986 report for this series, M28A(86)-1, issued April 1986.

This report is available electronically in CENDATA, the Bureau's online information service, through a commercial vendor. The electronic version of this report will be available approximately one week earlier than the printed report. The CENDATA report for December 1986 will be released on or about February 9, 1987. For further information, contact Customer Service, DUSD, Bureau of the Census, Washington, D.C. 20233, or call (301) 763-4100.

Table 1. SUMMARY OF PRODUCTION OF PRINCIPAL INORGANIC CHEMICALS: 1984 to 1986

(Short tons)

Month and year	Chlorine gas (28121 11) (100%)	Sodium hydroxide, total liquid (28123 50) (100%)	Titanium dioxide (28161 00) (commodity wieght)	Hydrochloric acid (28194 41, 45,47) (100%)	Aluminum sulfate (28196 51) (17% Al_2O_3)	Sodium phosphate tripoly (28197 38) (100%)	Phosphorus elemental (28199 58) (100%)	Aluminum oxide (28195 00) (100%)
1986								
November	815,368	864,620	73,350	214,794	83,065	50,194	29,357	(S)
October	838,785	888,642	75,981	217,802	110,604	50,361	31,629	(S)
September	877,271	917,809	78,665	233,571	110,403	47,470	28,244	(S)
August	885,980	932,816	72,800	238,198	123,521	61,418	28,699	304,514
July	906,624	943,061	79,848	279,600	119,243	48,200	29,770	231,380
June	896,958	946,138	73,477	274,602	113,125	53,392	27,850	302,918
May	899,846	939,691	81,843	299,266	104,040	58,088	31,671	314,894
April	873,359	925,649	78,150	261,978	103,353	58,085	31,513	323,786
March	892,862	960,361	72,671	245,594	105,276	57,112	31,045	334,414
February	787,684	873,295	71,429	221,425	90,910	52,643	29,780	298,448
January	828,761	891,767	75,981	225,012	95,837	51,877	33,340	329,359
1985								
Total	10,402,060	10,810,509	860,443	2,807,018	[1]1,268,087	625,399	359,196	3,500,977
December	870,127	896,294	78,591	216,741	99,127	41,181	27,509	240,699
November	773,867	824,284	70,772	205,128	100,992	44,590	29,092	260,951
October	844,121	896,926	71,412	245,493	108,209	54,132	29,919	258,504
September	840,591	868,164	76,312	240,366	104,354	51,211	26,228	285,634
August	838,477	874,742	69,148	219,421	112,539	54,396	28,863	271,216
July	899,386	931,814	75,310	239,650	111,634	54,024	29,379	294,381
June	923,820	924,094	77,239	248,561	108,976	54,710	32,746	289,523
May	921,530	952,112	71,050	248,596	106,785	55,791	32,002	296,090
April	920,985	964,583	72,219	237,855	103,166	54,021	32,844	321,801
March	902,707	943,656	66,899	265,303	112,443	58,803	31,984	341,565
February	823,753	864,533	65,387	228,686	95,442	49,096	27,344	296,391
January	842,696	869,307	66,103	211,218	104,420	53,444	31,286	344,222
1984								
Total	10,699,543	10,914,071	834,889	2,692,567	1,239,032	692,262	386,063	3,954,349
December	884,571	918,798	64,620	212,482	89,519	54,925	35,755	293,211
November	849,154	870,006	76,633	196,397	90,661	59,842	32,875	273,400

Note: Data for 1985 have been revised based on the comparison of figures from monthly report M28A with the 1985 annual report MA28A, Inorganic Chemicals, issued October 1986.

(S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1]The 1985 aluminum sulfate production figure has been revised due to new information from several companies.

Address inquiries concerning these figures to U.S. Department of Commerce, Bureau of the Census, Industry Division, Washington, D.C. 20233, or call Debbie Clemens, (301) 763-7807.

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Table 2. PRIMARY PRODUCTION AND STOCKS OF INORGANIC CHEMICALS

(Short tons)

Product code	Product description	November 1986		October 1986		November 1985	
		Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants
	Chlorine and alkalies:						
	Chlorine (100%):						
28121 11	Gas[1]	a815,368	(NA)	a838,785	(NA)	779,105	(NA)
28121 15	Liquid	a614,293	(NA)	a657,716	(NA)	a462,421	(NA)
	Sodium hydroxide (caustic soda) (100%) (all processes):						
28123 50	Liquid[2]	a864,620	(NA)	a888,642	(NA)	834,995	(NA)
28123 67	Dry (all forms)	18,353	(NA)	21,294	(NA)	17,696	(NA)
28125 21	Potassium hydroxide (caustic potash) (88 to 92%), liquid[2]	(D)	(NA)	(D)	(NA)	23,419	(NA)
28125 30	Finished sodium bicarbonate (58% Na_2O)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28125 90 14745 11	Sodium carbonate, natural (58%)[3]	651,410	295,526	700,233	283,340	735,746	388,319
	Acids:						
	Hydrochloric (100%)	a214,794	(NA)	a217,802	(NA)	202,357	(NA)
28194 41	From salt and acid	(4)	(NA)	(4)	(NA)	(4)	(NA)
28194 45	From chlorine and hydrogen	16,748	(NA)	19,738	(NA)	19,298	(NA)
28194 47	Byproduct and other	4 a198,046	(NA)	4 a198,064	(NA)	4 a183,039	(NA)
	Hydrofluoric (100%):						
28194 61	Produced and withdrawn from system (anhydrous, technical, and aqueous)[5]	12,393	(NA)	13,493	(NA)	10,551	(NA)
28194 65	Produced but not withdrawn from system	(D)	(NA)	(D)	(NA)	(D)	(NA)
28194 68	Boric acid (100% H_3BO_3), (ortho boric acid)	(D)	(D)	(D)	(D)	(D)	(D)
	Other chemicals:						
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3)	(S)	(D)	(S)	(D)	204,273	a154,673
28196 17	Aluminum chloride, anhydrous (100%)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28196 51	Aluminum sulfate (commercial) (17% aluminum oxide)[6]	a83,065	(NA)	a110,604	(NA)	a79,179	(NA)
28199 12	Calcium carbide (commercial)	17,720	(NA)	18,771	(NA)	17,486	(NA)
28199 19	Calcium phosphates:						
	Monobasic (21% minimum P) (100%)[7]	47,312	21,469	41,832	r14,233	(NA)	(NA)
	Dibasic (18.5% minimum P) (100%)[7]	48,877	36,417	54,418	30,124	62,992	46,817
	Tribasic (defluorinated phosphate rock) (18.0% minimum P):						
28742 71	Animal feed, grade (defluorinated phosphate rock) (100%)	a43,842	21,850	a42,371	18,809	24,055	15,540
28199 22	Other grades (100%)	a1,912	(D)	a2,063	(D)	(D)	(D)
	Carbon, activated[8]	7,691	8,985	8,452	8,169	7,681	11,295
28199 25	Granular carbons (dry weight)[9]	3,988	6,289	a r3,888	a5,549	3,641	7,618
28199 27	Pulverized carbons (dry weight)	3,703	2,696	4,564	2,620	4,040	3,591
	Chrome colors:						
28163 15	Chrome yellow and orange (c.p.)	1,006	(NA)	1,605	(NA)	1,332	(NA)
28163 17	Molybdate chrome orange (c.p.)	(D)	(NA)	606	(NA)	366	(NA)
28199 39	Hydrogen peroxide (100% by weight)	14,259	(NA)	12,715	(NA)	12,265	(NA)
28199 58	Phosphorus, elemental, white (yellow) and red (technical)	29,357	(D)	31,629	15,905	28,757	(D)
28199 60	Phosphorus, oxychloride (100%)	2,265	(NA)	3,233	(NA)	2,573	(NA)
28199 61	Phosphorus, pentasulfide (100%)	5,704	(NA)	5,414	(NA)	5,455	(NA)
28199 63	Phosphorus, trichloride (chloride) (100%)	9,184	(NA)	7,715	(NA)	6,282	(NA)
28197 18	Potassium pyrophosphate (tetrapotassium pyrophosphate) (anhydrous, 100%)	1,726	(NA)	1,288	(NA)	1,916	(NA)
28199 69	Silicon tetrachloride (siltet) (100% $SiCl_4$)	(S)	(NA)	(S)	(NA)	a2,785	(NA)
28197 21	Sodium metal (100%)	(D)	(D)	(D)	(D)	(D)	3,936
28199 33	Sodium bichromate and chromate (hydrous)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28197 27	Sodium chlorate (100%)	22,477	a9,284	r24,299	a11,361	22,770	12,637
29197 30	Sodium hydrosulfite (100%)	(D)	(NA)	(D)	(NA)	(D)	(NA)
	Sodium phosphates:						
28197 34	Tribasic (100%)	2,228	(NA)	r2,371	(NA)	2,856	(NA)
28197 35	Tetrabasic (pyro) (100%)	2,296	(NA)	2,856	(NA)	1,501	(NA)
28197 36	Meta (100%)	2,407	(NA)	3,078	(NA)	2,825	(NA)
28197 38	Tripoly (100%)	50,194	(NA)	50,361	(NA)	43,023	(NA)
28197 41	Sodium silicate (soluble silicate glass, liquid and solid) (anhydrous)[10]	47,962	(NA)	68,303	(NA)	64,088	(NA)
28197 42	Metasilicate pentahydrate (100%)	4,105	(NA)	5,142	(NA)	3,828	(NA)
28197 44	Metasilicate anhydrous (100%)	4,510	(NA)	4,774	(NA)	4,163	(NA)
	Sodium sulfate (100%)	65,074	(NA)	65,724	(NA)	65,078	(NA)
28197 61	High purity	38,130	(NA)	40,171	(NA)	37,551	(NA)
28197 66	Lower purity (99% or less) (includes Glaubers salt)	26,944	(NA)	25,553	(NA)	27,527	(NA)
28161 00	Titanium dioxide (composite and pure) (commodity weight)[11]	73,350	67,762	75,981	64,462	66,903	(D)

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28A(86)-1, issued April 1986, for a discussion of estimation of missing reports): a20 percent or more of this item is estimated.

(D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. rRevised by 5 percent or more from previously published figures. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1]Production includes amounts liquefied.
[2]Liquid production figures represent total production, including quantities later evaporated to solid caustic.
[3]Source: U.S. Bureau of Mines.
[4]Beginning in July 1985, "Hydrochloric acid from salt and acid" is combined with "Hydrochloric acid, byproduct and other".
[5]Excludes anhydrous used in aqueous.
[6]Excludes quantities produced and consumed in municipalities.
[7]Includes animal feed and other grades, but excludes superphosphate or other fertilizer materials.
[8]Excludes reactivated carbon.
[9]Includes pelleted carbon.
[10]Excludes amounts produced and consumed in making meta, ortho, and sesquisilicates.
[11]Represents total stocks of producing companies, including amounts held at locations other than producing plants.

Table 3. PRODUCTION OF INORGANIC CHEMICALS, BY STATE

(Short tons)

Geographic area	Aluminum sulfate, commercial (17% Al_2O_3)[1]	Sodium silicate (anhydrous)[2]	Hydrochloric acid (100% HCL)	Chlorine gas (100% Cl)[3]	Sodium hydroxide (100% NaOH) total liquid, all processes[4]
NOVEMBER 1986					
United States	[a]83,065	47,962	[a]214,794	[a]815,368	[a]864,620
Alabama	(D)	(D)	(D)	(D)	50,691
California	[a]4,413	(D)	(S)	(D)	(D)
Georgia	[a]7,601	[a]7,722	(D)	[a]16,878	(D)
Illinois	(D)	(D)	7,157	-	-
Kentucky	(D)	-	(D)	(D)	(D)
Louisiana	7,299	(D)	(S)	[a]315,680	[a]346,168
Michigan	(D)	-	[a]4,202	-	(D)
New Jersey	(D)	(D)	6,263	-	-
New York	-	-	(D)	44,471	43,661
Tennessee	(S)	(D)	-	(D)	(D)
Texas	2,399	-	(S)	(D)	(D)
Washington	(S)	(D)	1,404	41,122	45,870
West Virginia	-	-	(S)	(D)	(D)
All other states	42,243	9,130	28,717	73,557	65,194
OCTOBER 1986					
United States	[a]110,604	68,303	[a]217,802	[a]838,785	[a]888,642
Alabama	(D)	(D)	(D)	53,556	51,708
California	5,744	(D)	[a]7,603	(D)	(D)
Georgia	11,359	9,392	(?)	[a]16,734	(D)
Illinois	(D)	(D)	8,425	(D)	(D)
Kentucky	(D)	-	(D)	(D)	(D)
Louisiana	9,758	(D)	(S)	[a]322,588	[a]355,019
Michigan	(D)	-	[a]2,740	-	(D)
New Jersey	(D)	(D)	6,281	-	-
New York	-	-	(D)	44,775	43,512
Tennessee	(S)	(D)	-	(D)	(D)
Texas	1,915	(D)	(S)	(D)	(D)
Washington	5,835	(D)	1,661	43,252	49,050
West Virginia	(D)	-	5,478	(D)	(D)
All other states	52,909	14,523	34,000	80,176	69,546

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28A(86)-1, issued April 1986, for a discussion of estimation of missing reports): [a]20 percent or more of this item is estimated.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1]Excludes quantities produced and consumed in municipalities.
[2]Excludes amounts produced and consumed in making meta, ortho, and sesquisilicates.
[3]Production includes amount liquefied.
[4]Includes quantities later evaporated to solid.

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Table 4. PRODUCTION, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF SELECTED INORGANIC CHEMICALS: NOVEMBER 1986

(Short tons)

Product code	Product description	Quantity produced	Exports of domestic merchandise[1]	Imports for consumption[2]	Apparent consumption[3]	Percent imports to apparent consumption
28161 00	Titanium dioxide (composite and pure).....	75,981	7,889	12,215	80,307	15.2
	Hydrochloric acid:					
28194 41	From salt and acid.....	217,802	2,208	9,867	225,461	4.4
28194 45	From chlorine and hydrogen.....					
28194 47	By-product and other.....					
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3).....	(S)	34,887	383,358	(S)	(S)
28196 51	Aluminum sulfate (commercial).....	110,604	433	2,836	113,007	2.5
28197 27	Sodium chlorate.....	24,299	246	17,266	41,319	41.8
28197 30	Sodium hydrosulfite.....	(D)	1,523	257	(D)	(D)
	Sodium sulfates (anhydrous 100%):					
28197 61	High purity.....	65,724	11,078	13,930	68,576	20.3
28197 66	Lower purity (99% or less) (including Glauber's salt).....					
28199 12	Calcium carbide (commercial).....	18,771	108	1,462	20,125	7.3
28199 58	Phosphorus elemental.....	31,629	1,901	45	29,773	(Z)

Note: This table includes only products relative to this report which are directly comparable for imports, exports, and domestic output (see table 5 in the January 1986 report, M28A(86)-1, issued April 1986).

(D) Data withheld to avoid disclosing figures for individual companies. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census. (Z) Less than one-half of 1 percent.

[1]Source: Bureau of the Census report EX 546, U.S. Exports.
[2]Source: Bureau of the Census report IM 145-X, U.S. Imports for Consumption and General Imports.
[3]Apparent consumption represents new domestic supply and is derived by subtracting exports from the total of manufactures' production plus imports.

M28A(86)-12

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Inorganic Chemicals

U.S. Department of Commerce
BUREAU OF THE CENSUS

DECEMBER 1986

M28A(86)-12
Issued March 1987

The statistics in this publication are based on a survey of manufacturers and represent total U.S. production and stocks of specified inorganic chemicals. Estimates are included for companies for which reports were not received in time for tabulation. A description of the survey methodology and related information may be found in the January 1986 report for this series, M28A(86)-1, issued April 1986.

This report is available electronically in CENDATA, the Bureau's online information service, through a commercial vendor. The electronic version of this report will be available approximately one week earlier than the printed report. The CENDATA report for January 1987 will be released on or about March 12, 1987. For further information, contact Customer Service, DUSD, Bureau of the Census, Washington, D.C. 20233, or call (301) 763-4100.

Table 1. SUMMARY OF PRODUCTION OF PRINCIPAL INORGANIC CHEMICALS: 1984 to 1986

(Short tons)

Month and year	Chlorine gas (28121 11) (100%)	Sodium hydroxide, total liquid (28123 50) (100%)	Titanium dioxide (28161 00) (commodity weight)	Hydrochloric acid (28194 41, 45,47) (100%)	Aluminum sulfate (28196 51) (17% Al_2O_3)	Sodium phosphate tripoly (28197 38) (100%)	Phosphorus elemental (28199 58) (100%)	Aluminum oxide (28195 00) (100%)
1986								
Total	10,426,072	11,055,060	917,305	2,928,713	1,259,146	633,594	361,506	3,598,896
December	922,574	971,211	83,110	r230,456	96,464	44,754	28,608	(S)
November	815,368	864,620	73,350	r201,209	86,370	50,194	29,357	(S)
October	838,785	888,642	75,981	217,802	110,604	50,361	31,629	(S)
September	877,271	917,809	78,665	233,571	110,403	47,470	28,244	(S)
August	885,980	932,816	72,800	238,198	123,521	61,418	28,699	304,514
July	906,624	943,061	79,848	279,600	119,243	48,200	29,770	231,380
June	896,958	946,138	73,477	274,602	113,125	53,392	27,850	302,918
May	899,846	939,691	81,843	299,266	104,040	58,088	31,671	314,894
April	873,359	925,649	78,150	261,978	103,353	58,085	31,513	323,786
March	892,862	960,361	72,671	245,594	105,276	57,112	31,045	334,414
February	787,684	873,295	71,429	221,425	90,910	52,643	29,780	298,448
January	828,761	891,767	75,981	225,012	95,837	51,877	33,340	329,359
1985								
Total	10,402,060	10,810,509	860,443	2,807,018	1,268,087	625,399	359,196	3,500,977
December	870,127	896,294	78,591	216,741	99,127	41,181	27,509	240,699
November	773,867	824,284	70,772	205,128	100,992	44,590	29,092	260,951
October	844,121	896,926	71,412	245,493	108,209	54,132	29,919	258,504
September	840,591	868,164	76,312	240,366	104,354	51,211	26,228	285,634
August	838,477	874,742	69,148	219,421	112,539	54,396	28,863	271,216
July	899,386	931,814	75,310	239,650	111,634	54,024	29,379	294,381
June	923,820	924,094	77,239	248,561	108,976	54,710	32,746	289,523
May	921,530	952,112	71,050	248,396	106,785	53,791	32,002	296,090
April	920,985	964,583	72,219	237,855	103,166	54,021	32,844	321,801
March	902,707	943,656	66,899	265,303	112,443	58,803	31,984	341,565
February	823,753	864,533	65,387	228,686	95,442	49,096	27,344	296,391
January	842,696	869,307	66,103	211,218	104,420	53,444	31,288	344,222
1984								
Total	10,699,543	10,914,071	834,889	2,692,567	1,239,032	692,262	386,063	3,954,349
December	884,371	918,798	64,620	212,482	89,519	54,925	35,755	293,211

Note: Data for 1985 have been revised based on the comparison of figures from monthly report M28A with the 1985 annual report MA28A, Inorganic Chemicals, issued October 1986.

rRevised by 5 percent or more from previously published figures. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

Address inquiries concerning these figures to U.S. Department of Commerce, Bureau of the Census, Industry Division, Washington, D.C. 20233, or call Debbie Clemens, (301) 763-7807.

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Table 2. PRIMARY PRODUCTION AND STOCKS OF INORGANIC CHEMICALS

(Short tons)

Product code	Product description	December 1986		November 1986		December 1985	
		Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants	Quantity produced	Stocks at producing plants
	Chlorine and alkalies:						
	Chlorine (100%):						
28121 11	Gas[1]	922,574	(NA)	[a]815,368	(NA)	875,365	(NA)
28121 15	Liquid	727,920	(NA)	640,937	(NA)	540,599	(NA)
	Sodium hydroxide (caustic soda) (100%) (all processes):						
28123 50	Liquid[2]	971,211	(NA)	[a]864,620	(NA)	907,005	(NA)
28123 67	Dry (all forms)	16,972	(NA)	18,353	(NA)	15,243	(NA)
28125 21	Potassium hydroxide (caustic potash) (88 to 92%), liquid[2]	(D)	(NA)	(D)	(NA)	22,350	(NA)
28125 30	Finished sodium bicarbonate (58% Na_2O)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28125 90							
14745 11	Sodium carbonate, natural (58%)[3]	594,752	294,383	651,410	295,526	739,011	427,630
	Acids:						
	Hydrochloric (100%)	230,456	(NA)	[a r]201,209	(NA)	213,972	(NA)
28194 41	From salt and acid	(4)	(NA)	(4)	(NA)	(4)	(NA)
28194 45	From chlorine and hydrogen	[4]18,000	(NA)	[4 a r]16,748	(NA)	[4]18,679	(NA)
28194 47	Byproduct and other	[4]212,456	(NA)	[4 a r]184,461	(NA)	[4]195,293	(NA)
	Hydrofluoric (100%):						
28194 61	Produced and withdrawn from system (anhydrous, technical, and aqueous)[5]	11,607	(NA)	12,393	(NA)	8,309	(NA)
28194 65	Produced but not withdrawn from system	(D)	(NA)	(D)	(NA)	(D)	(NA)
28194 66	Boric acid (100% H_3BO_3), (ortho boric acid)	(D)	(D)	(D)	(D)	(D)	(D)
	Other chemicals:						
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3)	(S)	[a]33,260	(S)	(D)	[a]184,016	[a]169,094
28196 17	Aluminum chloride, anhydrous (100%)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28196 51	Aluminum sulfate (commercial) (17% aluminum oxide)[6]	[a]96,464	(NA)	[a]86,370	(NA)	[a]77,468	(NA)
28199 12	Calcium carbide (commercial)	14,155	(NA)	[r]16,912	(NA)	18,084	(NA)
28199 19	Calcium phosphates:						
	Monobasic (21% minimum P) (100%)	55,831	15,995	47,312	21,125	(NA)	(NA)
	Dibasic (18.5% minimum P) (100%)[7]	50,393	37,289	48,877	36,417	62,563	23,480
	Tribasic (defluorinated phosphate rock) (18.0% minimum P):						
28742 71	Animal feed, grade (defluorinated phosphate rock) (100%)	[a]41,231	22,338	[a]43,842	21,850	27,956	18,920
28199 22	Other grades (100%)	(D)	(D)	(D)	(D)	(D)	(D)
	Carbon, activated[8]	9,211	8,731	7,691	8,985	7,393	10,686
28199 25	Granular carbons (dry weight)[9]	4,451	5,937	3,988	6,289	3,331	6,926
28199 27	Pulverized carbons (dry weight)	4,760	2,794	3,703	2,696	4,062	3,760
	Chrome colors:						
28163 15	Chrome yellow and orange (c.p.)	977	(NA)	1,006	(NA)	1,172	(NA)
28163 17	Molybdate chrome orange (c.p.)	416	(NA)	(D)	(NA)	332	(NA)
28199 39	Hydrogen peroxide (100% by weight)	14,667	(NA)	14,259	(NA)	10,442	(NA)
28199 58	Phosphorus, elemental, white (yellow) and red (technical)	28,608	(D)	29,357	(D)	26,735	(D)
28199 60	Phosphorus, oxychloride (100%)	3,089	(NA)	2,265	(NA)	1,980	(NA)
28199 61	Phosphorus, pentasulfide (100%)	4,724	(NA)	5,704	(NA)	5,211	(NA)
28199 63	Phosphorus, trichloride (chloride) (100%)	9,875	(NA)	9,184	(NA)	5,972	(NA)
28197 18	Potassium pyrophosphate (tetrapotassium pyrophosphate) (anhydrous, 100%)	1,546	(NA)	1,726	(NA)	1,591	(NA)
28199 69	Silicon tetrachloride (silicon) (100% $SiCl_4$)	(S)	(NA)	(S)	(NA)	1,553	(NA)
28197 21	Sodium metal (100%)	(D)	(D)	(D)	(D)	(D)	3,992
28199 33	Sodium bichromate and chromate (hydrous)	(D)	(NA)	(D)	(NA)	(D)	(NA)
28197 27	Sodium chlorate (100%)	25,042	[a]9,225	22,477	[a]9,048	22,018	7,225
29197 30	Sodium hydrosulfite (100%)	(D)	(NA)	(D)	(NA)	(D)	(NA)
	Sodium phosphates:						
28197 34	Tribasic (100%)	1,853	(NA)	[r]2,679	(NA)	2,798	(NA)
28197 35	Tetrabasic (pyro) (100%)	4,124	(NA)	2,296	(NA)	2,752	(NA)
28197 36	Meta (100%)	2,580	(NA)	2,407	(NA)	2,536	(NA)
28197 38	Tripoly (100%)	44,754	(NA)	50,194	(NA)	39,614	(NA)
28197 41	Sodium silicate (soluble silicate glass, liquid and solid) (anhydrous)[10]	51,533	(NA)	47,962	(NA)	49,852	(NA)
28197 42	Metasilicate pentahydrate (100%)	4,640	(NA)	[r]4,105	(NA)	3,157	(NA)
28197 44	Metasilicate anhydrous (100%)	3,661	(NA)	[r]4,289	(NA)	5,002	(NA)
	Sodium sulfate (100%)	69,567	(NA)	65,074	(NA)	62,118	(NA)
28197 61	High purity	43,182	(NA)	38,130	(NA)	35,858	(NA)
28197 66	Lower purity (99% or less) (includes Glaubers salt)	26,385	(NA)	26,944	(NA)	26,260	(NA)
28161 00	Titanium dioxide (composite and pure) (commodity weight)[11]	83,110	76,896	73,350	67,762	74,722	56,756

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28A(86)-1, issued April 1986, for a discussion of estimation of missing reports): [a]20 percent or more of this item is estimated.

(D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. [r]Revised by 5 percent or more from previously published figures. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1]Production includes amounts liquefied.
[2]Liquid production figures represent total production, including quantities later evaporated to solid caustic.
[3]Source: U.S. Bureau of Mines.
[4]Beginning in July 1985, "Hydrochloric acid from salt and acid" is combined with "Hydrochloric acid, byproduct and other".
[5]Excludes anhydrous used in aqueous.
[6]Excludes quantities produced and consumed in municipalities.
[7]Includes animal feed and other grades, but excludes superphosphate or other fertilizer materials.
[8]Excludes reactivated carbon.
[9]Includes pelleted carbon.
[10]Excludes amounts produced and consumed in making meta, ortho, and sesquisilicates.
[11]Represents total stocks of producing companies, including amounts held at locations other than producing plants.

Table 3. PRODUCTION OF INORGANIC CHEMICALS, BY STATE

(Short tons)

Geographic area	Aluminum sulfate, commercial (17% Al_2O_3)[1]	Sodium silicate (anhydrous)[2]	Hydrochloric acid (100% HCL)	Chlorine gas (100% Cl)[3]	Sodium hydroxide (100% NaOH) total liquid, all processes[4]
DECEMBER 1986					
United States	a 96,484	51,533	230,456	922,574	971,211
Alabama	(D)	(D)	(D)	a 56,998	53,872
California	a 3,919	(D)	a 6,041	(D)	(D)
Georgia	a 13,094	a 7,905	(D)	a 18,069	(D)
Illinois	(D)	(D)	8,790	-	-
Kentucky	(D)	-	(D)	(D)	(D)
Louisiana	11,305	(D)	a 58,606	385,570	424,472
Michigan	(D)	-	a 4,474	-	-
New Jersey	(D)	(D)	5,959	-	-
New York	-	-	(D)	49,472	47,968
Tennessee	(S)	(D)	-	(D)	(D)
Texas	1,774	(D)	62,390	(D)	(D)
Washington	6,083	(D)	1,502	45,236	50,012
West Virginia	-	-	(D)	(D)	(D)
All other states	45,498	15,617	31,270	78,369	65,823
NOVEMBER 1986					
United States	a 86,370	47,962	a r 201,209	a 815,368	a 864,620
Alabama	(D)	(D)	(D)	(D)	50,691
California	r 4,737	(D)	(S)	(D)	(D)
Georgia	r 11,240	a 7,722	(D)	a 16,878	(D)
Illinois	(D)	(D)	7,157	-	-
Kentucky	(D)	-	(D)	(D)	(D)
Louisiana	7,299	(D)	(S)	a 315,680	a 346,168
Michigan	(D)	-	a 4,202	-	(D)
New Jersey	(D)	(D)	6,263	-	-
New York	-	-	(D)	44,471	43,661
Tennessee	(S)	(D)	-	(D)	(D)
Texas	r 2,133	-	37,335	(D)	(D)
Washington	5,160	(D)	1,404	41,122	45,870
West Virginia	-	-	6,343	(D)	(D)
All other states	40,513	9,130	28,717	73,557	65,194

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28A(86)-1, issued April 1986, for a discussion of estimation of missing reports): a 20 percent or more of this item is estimated.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. r Revised by 5 percent or more from previously published figures. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

1 Excludes quantities produced and consumed in municipalities.
2 Excludes amounts produced and consumed in making meta, ortho, and sesquisilicates.
3 Production includes amount liquefied.
4 Includes quantities later evaporated to solid.

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(Short tons)

Product code	Product description	Quantity produced	Exports of domestic merchandise[1]	Imports for consumption[2]	Apparent consumption[3]	Percent imports to apparent consumption
28161 00	Titanium dioxide (composite and pure)	73,350	10,829	17,349	79,870	21.7
	Hydrochloric acid:					
28194 41	From salt and acid	201,209	1,475	9,178	208,912	4.4
28194 45	From chlorine and hydrogen					
28194 47	By-product and other					
28195 00	Aluminum oxide, except natural alumina (100% Al_2O_3)	(S)	35,458	268,294	(S)	(S)
28196 51	Aluminum sulfate (commercial)	88,370	394	4,813	90,789	5.3
28197 27	Sodium chlorate	22,477	230	20,248	42,493	47.6
28197 30	Sodium hydrosulfite	(D)	1,532	395	(D)	(D)
	Sodium sulfate (anhydrous 100%):					
28197 61	High purity	65,074	19,694	9,230	54,610	16.9
28197 66	Lower purity (99% or less) (including Glauber's salt)					
28199 12	Calcium carbide (commercial)	16,912	115	1,598	18,395	8.7
28199 58	Phosphorus elemental	29,357	1,808	132	27,681	0.5

Note: This table includes only products relative to this report which are directly comparable for imports, exports, and domestic output (see table 5 in the January 1986 report, M28A(86)-1, issued April 1986).

(D) Data withheld to avoid disclosing figures for individual companies. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1]Source: Bureau of the Census report EM 546, U.S. Exports.
[2]Source: Bureau of the Census report EM 145-X, U.S. Imports for Consumption and General Imports.
[3]Apparent consumption represents new domestic supply and is derived by subtracting exports from the total of manufactures' production plus imports.